

Board of Directors Meeting Agenda

Date: March 21, 2024

Time: 6:00 p.m.

Location: SMUD Headquarters Building, Auditorium
6201 S Street, Sacramento, California

Powering forward. Together.



•AMENDED AGENDA

- Agenda Item 9 is removed.*
- Updated to reflect date change for Board Energy Resources & Customer Services Committee and Special SMUD Board of Directors Meeting.*

**SACRAMENTO MUNICIPAL UTILITY DISTRICT
BOARD OF DIRECTORS MEETING
SMUD HEADQUARTERS BUILDING
AUDITORIUM – 6201 S STREET
SACRAMENTO, CALIFORNIA**

March 21, 2024 – 6:00 p.m.

Virtual Viewing or Attendance:

Live video streams (view-only) and indexed archives of meetings are available at:
http://smud.granicus.com/ViewPublisher.php?view_id=16

Zoom Webinar Link: [Join SMUD Board of Directors Meeting Here](#)

Webinar/Meeting ID: 161 739 1855

Passcode: 762939

Phone Dial-in Number: 1-669-254-5252 or 1-833-568-8864 (Toll Free)

Verbal Public Comment:

Members of the public may provide verbal public comment by:

- Completing a sign-up form at the table outside of the meeting room and giving it to SMUD Security.
- Using the “Raise Hand” feature in Zoom (or pressing *9 while dialed into the telephone/toll-free number) during the meeting at the time public comment is called. Microphones will be enabled for virtual or telephonic attendees when the commenter’s name is announced.

Written Public Comment:

Members of the public may provide written public comment on a specific agenda item or on items not on the agenda (general public comment) by submitting comments via email to PublicComment@smud.org or by mailing or bringing physical copies to the meeting. Email is not monitored during the meeting. Comments will not be read into the record but will be provided to the Board and placed into the record of the meeting if received within two hours after the meeting ends.

Call to Order.

a. Roll Call.

1. Approval of the Agenda.

2. Committee Chair Reports.
 - a. Committee Chair report of March 12, 2024, Strategic Development Committee
 - b. Committee Chair report of March 12, 2024, Policy Committee
 - c. Committee Chair Report of March 19, 2024, Finance and Audit Committee
 - d. Committee Chair Report of March ~~2019~~, 2024, Energy Resources & Customer Services Committee

Item 5 was reviewed by the March 12, 2024, Policy Committee. Items 6 through 8 were reviewed by the March 19, 2024, Finance and Audit Committee. Items ~~9 through 10 and 11~~ were reviewed by the March ~~2019~~, 2024, Energy Resources & Customer Services Committee.

Comments from the public are welcome when these agenda items are called.

Consent Calendar:

3. Approve Board member compensation for service rendered at the request of the Board (pursuant to Resolution No. 23-06-02) for the period of February 16, 2024, through March 15, 2024.
4. Approval of the minutes of the meeting of February 15, 2024.
5. Accept the monitoring report for **Strategic Direction SD-6, Safety Leadership**. Policy Committee 3/12. (Frankie McDermott)
6. Authorize submission of a SMUD **Clean PowerCity Pathways** project grant application to the **Department of Energy (DOE)** for the **Grid Resilience and Innovation Partnerships (GRIP) Topic Area 1 (TA1) Grant (Grant)** and authorize the Chief Executive Officer and General Manager to negotiate and execute in the name of Sacramento Municipal Utility District a **GRIP** grant recipient contract with **DOE** as well as all grant documents, including, but not limited to, applications, agreements, amendments and requests for payment, necessary to facilitate grant participation. **Finance and Audit Committee 3/19. (Lora Anguay)**
7. Authorize submission of a SMUD **Reimagining Thermal Resources Operations: Fleet in Transition (RETROFIT)** project grant application to the **Department of Energy (DOE)** for the **Grid Resilience and Innovation Partnerships (GRIP) Topic Area 3 (TA3) Grant (Grant)** and authorize the Chief Executive Officer and General Manager to negotiate and execute in the name of Sacramento Municipal Utility District a **GRIP** grant recipient contract with **DOE** as well as all grant documents, including, but not limited to, applications, agreements, amendments and requests for payment, necessary to facilitate grant participation. **Finance and Audit Committee 3/19. (Lora Anguay)**
8. Approve proposed revisions to **Board-Staff Linkage BL-13, Delegation to the CEO with Respect to Grants**. **Finance and Audit Committee 3/19. (Lora Anguay)**

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Discussion Calendar:

- ~~9. Certify the **California Environmental Quality Act (CEQA) Station J Bulk Transmission Substation Project (Project) Final Environmental Impact Report (FEIR)**, including adoption of the **Findings**; adopt the **Mitigation Monitoring and Reporting Program** for the **Project**; and approve the **Project**. **Energy Resources & Customer Services Committee 3/20**. **(Frankie McDermott)**~~

~~*Presenter: **Ellias van Ekelenburg***~~

- 10. Approve the issuance of **SMUD 2024 Series M Revenue Bonds** and/or **SMUD 2024 Series N Revenue Refunding Bonds**, authorize the distribution of the **Preliminary Official Statement**, and authorize the Chief Executive Officer and General Manager to execute documents necessary to complete the refunding transaction or transactions, including the **Bond Purchase Agreement or Agreements**. **Energy Resources & Customer Services Committee 3/2019**. **(Scott Martin)**

Presenter: Russell Mills

- 11. Authorize the Chief Executive Officer and General Manager to approve the inclusion of **SMUD’s** disclosure information (Appendix A) in the **Preliminary Official Statement** pursuant to the commodity prepay transaction with **Northern California Energy Authority (NCEA)** as the bond issuer, and execute the **Commodity Supply Agreement** and any other related documents necessary to facilitate this transaction. **Energy Resources & Customer Services Committee 3/2019**. **(Scott Martin)**

Presenter: Russell Mills

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Public Comment:

- 12. Items not on the agenda.

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Board and CEO Reports:

- 13. Directors' Reports.
- 14. President's Report.
- 15. CEO's Report.
 - a. Board Video

Summary of Board Direction

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FOLLOWING ADJOURNMENT OF THE FOREGOING SMUD BOARD OF DIRECTORS MEETING, THE SPECIAL MEETING OF THE FOLLOWING JOINT POWERS AGENCY WILL CONVENE:

NORTHERN CALIFORNIA ENERGY AUTHORITY

* * * * *

Board Committee Meetings and Special Meetings of the Board of Directors are held at the SMUD Headquarters Building, 6201 S Street, Sacramento

March 19, 2024	Finance and Audit Committee and Special SMUD Board of Directors Meeting	Auditorium*	6:00 p.m.
• March 2019 , 2024	Energy Resources & Customer Services Committee and Special SMUD Board of Directors Meeting	Auditorium	<u>Immediately following the Finance and Audit Committee and Special SMUD Board of Directors Meeting scheduled to begin at</u> 6:00 p.m.
April 9, 2024	Strategic Development Committee and Special SMUD Board of Directors Meeting	Auditorium	6:00 p.m.
April 10, 2024	Policy Committee and Special SMUD Board of Directors Meeting	Auditorium	6:00 p.m.

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Regular Meetings of the Board of Directors are held at the SMUD Headquarters Building, 6201 S Street, Sacramento

April 18, 2024	Auditorium*	6:00 p.m.
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**The Auditorium is located in the lobby of the SMUD Headquarters Building, 6201 S Street, Sacramento, California.*

Members of the public shall have up to three (3) minutes to provide public comment on items on the agenda or items not on the agenda, but within the jurisdiction of SMUD. The total time allotted to any individual speaker shall not exceed nine (9) minutes.

Members of the public wishing to inspect public documents related to agenda items may click on the Information Packet link for this meeting on the smud.org website or may call 1-916-732-7143 to arrange for inspection of the documents at the SMUD Headquarters Building, 6201 S Street, Sacramento, California.

ADA Accessibility Procedures: Upon request, SMUD will generally provide appropriate aids and services leading to effective communication for qualified persons with disabilities so that they can participate equally in this meeting. If you need a reasonable auxiliary aid or service for effective communication to participate, please email Toni.Stelling@smud.org, or contact by phone at 1-916-732-7143, no later than 48 hours before this meeting.

RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

That this Board hereby approves Board member compensation for service rendered at the request of the Board (pursuant to Resolution No. 23-06-02) for the period of February 16, 2024, through March 15, 2024.

The Board of Directors of the Sacramento Municipal Utility District met in regular session simultaneously in the Auditorium of the SMUD Headquarters Building at 6201 S Street, Sacramento, and via virtual meeting (online) at 6:00 p.m.

Roll Call:

Presiding: President Herber

Present: Directors Rose, Fishman, Kerth, Tamayo, and Sanborn

Absent: Director Bui-Thompson

Present also were Paul Lau, Chief Executive Officer and General Manager; Laura Lewis, Chief Legal & Government Affairs Officer and General Counsel and Secretary, other members of SMUD's executive management; and SMUD employees and visitors.

Director Tamayo shared the 2030 Climate Action Tip.

President Herber called for approval of the agenda. Vice President Fishman moved for approval of the agenda, Director Kerth seconded, and the agenda was approved by a vote of 6-0, with Director Bui-Thompson absent.

Vice President Fishman, Vice Chair, presented the report on the Strategic Development Committee meeting held on February 6, 2024.

Director Tamayo, Chair, presented the report on the Policy Committee meeting held on February 6, 2024.

Director Kerth, Chair, presented the report on the Finance and Audit Committee meeting held on February 13, 2024.

President Herber then called for public comment for items on the agenda, but none was forthcoming.

President Herber then addressed the consent calendar consisting of Items 3 through 14. Director Sanborn moved for approval of the consent calendar, Vice President Fishman seconded, and Resolution Nos. 24-02-01

through 24-02-11 were approved by a vote of 6-0, with Director Bui-Thompson absent.

RESOLUTION NO. 24-02-01

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

That this Board hereby approves Board member compensation for service rendered at the request of the Board (pursuant to Resolution No. 23-06-02) for the period of January 16, 2024, through February 15, 2024.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

RESOLUTION NO. 24-02-02

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board approves the revisions to the **Governance Process GP-5, Election of Board President and Vice President** substantially in the form as set forth in **Attachment A**.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

SMUD BOARD POLICY



Category: Governance Process
Policy No.: GP-5
Title: Election of Board President and Vice President

The Board shall elect each year a president and vice president to preside over it, under the following terms and conditions:

- a) The nominations for and selection of president and vice president for the ensuing year shall be accomplished by the Board no later than the first regularly scheduled meeting in January.
- b) The president and vice president shall be elected upon a vote of four or more Board members voting in approval.
- c) The terms of president and vice president shall be for a period of one year or until such time as a successor has been selected pursuant to these rules.
- d) The president may serve no more than one full term in succession.
- e) During the absence of the president, the vice president will preside, and, in the event that both the president and vice president are absent, the members present shall select one of their members to act as president pro tem.
- f) In the event that the office of either president or vice president becomes vacant, the board, within 30 days from the date of such vacancy, will select one of its members to fill the term of that office.
- g) The president and/or vice president shall be recalled upon a vote of four or more Board members voting to recall. Nomination and election of a new president and/or vice president shall occur within 30 days from the date of the vote to recall.

Monitoring Method: Board Report

Frequency: Annual

Versioning:

December 19, 2002	Resolution No. 02-12-14	Date of Adoption.
October 16, 2003	Resolution No. 03-10-14	Date of Revision.
September 21, 2023	Resolution No. 23-09-02	Date of Revision.
February 15, 2024	Resolution No. 24-02-02	Date of Revision. [Current Policy]

RESOLUTION NO. 24-02-03

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board approves the revisions to the **Governance Process GP-12, Board Compensation and Benefits** substantially in the form as set forth in **Attachment B**.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

SMUD BOARD POLICY



Category: Governance Process
Policy No.: GP-12
Title: Board Compensation and Benefits

In keeping with the MUD Act, members of the Board of Directors are entitled to compensation for their service. Specifically:

- a) Each Board member may receive for each attendance at the meetings of the full Board, Board committee meetings, ad hoc committee meetings, publicly noticed SMUD workshops or meetings, other publicly noticed meetings where the Board member is representing the Board, state or federal legislative briefings or meetings where the Board member is representing the Board, meetings with SMUD customers or staff relating to SMUD business, community meetings or events where the Board member is representing SMUD, events where SMUD is being recognized, conferences and organized educational activities, the sum of \$317.00 per day of service. No director may receive compensation for more than ten (10) days in any one calendar month. Campaign and political meetings, events, and fundraisers are not compensable under this policy.
- b) Board member compensation shall be reviewed annually.
- c) Each Board member may also be reimbursed for expenses related to travel, meals, lodging and other actual and necessary expenses incurred in the performance of his or her official duties as described in subsection a). Reimbursement shall be in accordance with Internal Revenue Service regulations as established in Publication 463, or any successor publication.
- d) Each Board member may be reimbursed for computer and other technology purchases, rentals, and refurbishments that will aid them in the performance of their duties pursuant to reimbursement policies applicable to executive and senior leaders.
- e) Compensation forms shall be completed by a Director and distributed to the Board office. The Board shall review and approve compensation and any request for technology reimbursement at a regular Board meeting. Board member compensation, along with any requests for technology reimbursement, shall be placed on the consent calendar at each regular Board meeting, unless a Board member requests that it be placed on the discussion calendar.
- f) SMUD shall provide and contribute payment for health care benefits, equivalent to the contribution made to SMUD employees in the PAS employee group, to any Board member who elects such benefit, and additionally make an annual contribution payment of \$500 to a Flexible Spending Account.

- g) Subject to the applicable tax codes and IRS rules and regulations, and to the extent possible, SMUD shall direct payment to a SMUD defined contribution plan (either a 457(b) plan or a 401(k) plan) for each Director who elects to have such a benefit in the amount of 30% of compensation based on days of service. Directors who elect to receive this benefit must (1) have a SMUD defined contribution plan and (2) direct payment to the defined contribution plan of their choice at initial enrollment and then during (and only during) SMUD's open enrollment period for employee benefits.

Monitoring Method: Board Report

Frequency: Annual

Versioning:

December 19, 2002	Resolution No. 02-12-14	Date of Adoption.
October 16, 2003	Resolution No. 03-10-14	Date of Revision.
December 2, 2004	Resolution No. 04-12-03	Date of Revision.
December 1, 2005	Resolution No. 05-12-10	Date of Revision.
May 17, 2007	Resolution No. 07-05-08	Date of Revision.
July 16, 2009	Resolution No. 09-07-02	Date of Revision.
September 18, 2014	Resolution No. 14-09-07	Date of Revision.
December 20, 2018	Resolution No. 18-12-15	Date of Revision.
December 12, 2019	Resolution No. 19-12-05	Date of Revision.
June 15, 2023	Resolution No. 23-06-02	Date of Revision. (Effective Date = July 1, 2023)
September 21, 2023	Resolution No. 23-09-02	Date of Revision.
February 15, 2024	Resolution No. 24-02-03	Date of Revision. [Current Policy]

RESOLUTION NO. 24-02-04

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board approves the revisions to the **Governance Process GP-15, Board Traveling and Training Reimbursement** substantially in the form as set forth in **Attachment C**.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

SMUD BOARD POLICY

Category: Governance Process
Policy No.: GP-15
Title: Board Travel and Training Reimbursement

Board members shall have the opportunity to attend conferences, meetings, training, and various activities that are appropriate to their work as Directors and provide value to SMUD.

As part of this policy:

- a) Each Board member shall have an annual budget for travel and training, which shall be adjusted annually for inflation based on the Travel Price Index (July-June) and rounded to the nearest hundred dollars. The training budget shall include attendance at community functions.
- b) The Board shall approve its travel and training budget as part of the annual budget process. Budgeted travel and training funds shall expire at the end of each calendar year with no rollover option.
- c) The Board travel and training budget shall be managed by the Special Assistant to the Board as part of the Board Office budget.
- d) Requests for travel, training and events in excess of \$1,000 shall be accompanied by a written justification of the benefits to SMUD and consistency with Board policy and submitted to the Board Special Assistant. Written travel and training justifications, along with a status report on the Board's travel and training budget and individual directors' expenditures, shall be distributed to all Board members monthly for the purposes of transparency and oversight.
- e) Board members shall submit all relevant travel and training receipts to Board Office staff within two weeks for reconciliation.
- f) Board members shall publicly report the results of their travel and training at a Board meeting.
- g) New Board members shall receive an orientation in the Board's travel and training policy.

Monitoring Method: Board Report**Frequency: Annual****Versioning:**

November 13, 2008	Resolution No. 08-11-07	Date of Adoption. (Effective Date = January 1, 2009)
August 20, 2009	Resolution No. 09-08-15	Date of Revision.
October 6, 2011	Resolution No. 11-10-02	Date of Revision.
December 1, 2016	Resolution No. 16-12-03	Date of Revision.
September 21, 2023	Resolution No. 23-09-02	Date of Revision.
February 15, 2024	Resolution No. 24-02-04	Date of Revision. [Current Policy]

RESOLUTION NO. 24-02-05

WHEREAS, by Resolution No. 19-06-06, adopted on June 24, 2019, this Board approved and adopted the staff prepared **Local Hazard Mitigation Plan (LHMP)**, a five-year pre-disaster risk mitigation plan covering all areas where SMUD owns or operates electric infrastructure; and

WHEREAS, staff conducted an enterprise-wide process to prepare SMUD's updated **2024-2028 Hazard Mitigation Plan (HMP)**; and

WHEREAS, the Disaster Mitigation Act of 2000 (DMA 2000), passed by the United States Congress, emphasized the need for pre-disaster mitigation of potential hazards and made hazard mitigation grants available to state and local governments; and

WHEREAS, the **HMP** is required as a condition of future funding for mitigation projects under multiple Federal Emergency Management Agency (FEMA) pre- and post-disaster mitigation grant programs; and

WHEREAS, staff prepared the **HMP** pursuant to the process outlined in the DMA 2000 for cities, counties, and special districts, which includes an assessment of the most significant hazards SMUD plans for including, but not limited to, flood, dam failure, wildfire, earthquake, drought, climate change, severe weather, cyber threats, and terrorism; and

WHEREAS, the **HMP** was made available for stakeholder and public review and comment from December 1, 2023, through January 2, 2024; and

WHEREAS, once approved and adopted by the Board, the **HMP** will be submitted to the California Office of Emergency Services (Cal OES) and FEMA for review and approval; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. This Board adopts the SMUD **2024-2028 Hazard Mitigation Plan (HMP)** substantially in the form set forth in **Attachment D** hereto and made a part hereof.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to make future changes to the **HMP** that, in his

prudent judgment: (a) further the primary purpose of the **HMP**; and (b) are intended to provide a net benefit to SMUD.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

2024 – 2028 Hazard Mitigation Plan

Adopted: TBD



Executive Summary.....	12
1.0 Introduction.....	14
1.1 Background.....	14
1.2 Mitigation Plan Update.....	14
1.3 Purpose.....	15
1.4 Contents of Updated Plan.....	15
2.0 Updates to Plan.....	16
2.1 Previous Plans.....	16
2.2 Update.....	16
2.2.1 Grant Funding.....	16
2.2.2 Federal Eligibility.....	16
2.2.3 Changes in Development.....	16
2.3 What Has Changed.....	16
3.0 Planning Process.....	20
3.1 Governance and Planning Team.....	20
3.1.1 Executive Risk Oversight Committee (EROC).....	20
3.1.2 Risk Champion Network (RCN).....	21
3.1.3 Core Team.....	22
3.1.4 Planning Committee.....	22
3.1.5 Internal Meeting and Coordination.....	24
3.2 Defining Planning Area.....	24
3.3 Stakeholder and Agency Coordination.....	25
3.4 Regional Participation.....	29
3.5 Public Involvement.....	32
3.5.1 Strategy.....	32
3.5.2 Public Notice.....	32
3.5.3 Public Events.....	33
3.5.4 Hazard Mitigation Plan Website and E-mail.....	34
3.5.5 Public Comments on Draft Plan.....	34
3.6 Existing Documents and Programs.....	34
3.7 Plan Milestones.....	38
4.0 Planning Process.....	39
4.1 About SMUD.....	39
4.2 The Service Area.....	40

4.3 Purpose and Vision.....	42
4.4 Goal And Objectives	42
4.5 SMUD Priorities	43
4.6 The Electric System.....	43
4.6.1 The Distribution and Transmission System, Sacramento County	43
4.6.2 Hydroelectric System.....	43
4.6.3 Wind Power	45
4.6.4 Solar Photovoltaic	45
4.6.5 Local Gas-Fired Plants	46
4.6.6 Transmission.....	47
4.6.7 Distribution.....	47
4.7 Gas Pipeline	47
4.7.1 The Gas Pipeline.....	47
4.7.2 PG&E Backbone Gas Transmission Lines 400and 401.....	48
4.7.3 Gas Storage.....	48
4.8 TANC California-Oregon Transmission Project.....	49
4.9 SMUD Capital Projects	49
5.0 SMUD Facilities	49
5.1 General Facilities.....	49
6.0 Physical Setting.....	50
6.1 Geography.....	50
6.2 Climate.....	50
7.0 Demographics.....	51
7.1 Population Estimates.....	51
7.1.1 Current and Historical Population	51
7.1.2 Projected Future Population.....	51
7.2 Indicators for Social Vulnerability	52
7.2.1 Customer Opt-In Program	52
7.2.2 Sustainable Communities.....	52
7.3 Economy	55
7.3.1 Industry, Businesses, and Institutions.....	55
7.3.2 Employment Trends and Occupations.....	55
8.0 Hazards	56
8.1 Disaster Declaration	56

9.0 Regulations and Programs	62
9.1 Federal and State.....	62
9.2 Fiscal Capabilities	64
9.3 NFIP Compliance.....	64
9.4 Public Outreach Capability.....	64
10.0 Risk Assessment Methodology	67
10.1 Risk Assessment Tools.....	67
10.1.1 Results and Methodology	67
10.1.2 Mapping.....	67
10.1.3 Modeling.....	67
10.2 Risk Assessment Approach	67
10.2.1Enterprise Risk Management Framework.....	67
11.0 Fire Hazards	71
11.1 Wildfire.....	71
11.1.1 General Background	71
11.1.2 Hazard Profile	71
11.1.3 Secondary Impacts	78
11.1.4 Exposure and Vulnerability	78
11.1.5 Current Mitigation Efforts.....	78
11.2 Wildland-Urban Interfaced Structural Fires	83
11.2.1 General Background	83
11.2.2 Hazard Profile.....	84
11.2.3 Secondary Impacts.....	84
11.2.4 Exposure and Vulnerability	84
11.2.5 Current Mitigation	88
12.0 Water Rise Hazards	88
12.1 Flood and Flashflood.....	88
12.1.1 General Background.....	88
12.1.2 Hazard Profile.....	89
12.1.3 Exposure and Vulnerability	90
12.1.4 Future Trends in Development.....	91
12.2 Riverine, Stream and Alluvial Flood Hazards	92
12.3 Sea Level Rise, Coastal Flooding and Erosion Hazards	92
12.4 Tsunami and Seiche Hazards.....	92

12.5 Levee Failure	93
12.6 Dam Failure	95
12.6.1 Hazard Profile	96
12.7 Current Mitigation Efforts for Water Rise Hazards	99
13.0 Earthquakes and Geological Hazards.....	100
13.1 Earthquake.....	101
13.1.1 Hazard Profile	101
13.2 Fault Rupture	104
13.3 Liquefaction.....	107
13.3.1 Hazard Profile	107
13.4 Subsidence	107
13.4.1 Hazard Profile	107
13.5 Landslides.....	109
13.5.1 Hazard Profile	109
13.6 Volcanoes.....	110
13.6.1 Hazard Profile	110
13.7 Current Mitigation Efforts for Geological Hazards	112
14.0 Severe Weather and Storms.....	113
14.1 Extreme Heat.....	113
14.1.1 Hazard Profile	114
14.2 Freeze.....	117
14.3 Fog.....	118
14.4 Severe Storms, Hail and Lightning	119
14.5 High Winds and Tornadoes.....	120
14.5.1 Hazard Profile	120
14.6 Current Mitigation Efforts	124
14.7 Tree Mortality.....	125
14.7.1 Hazard Profile	126
14.7.2 Exposure and Vulnerability	127
14.7.3 Current Mitigation Efforts.....	128
15.0 Energy Shortage.....	128
15.1 Background.....	128
15.1.1 Hazard Profile	128
15.1.2 Exposure and Vulnerability	129

15.1.3 Current Mitigation Efforts	129
16.0 Climate Change.....	130
16.1 Background.....	130
16.1.1 Hazard Profile	130
16.1.2 Current Mitigation Efforts.....	131
17.0 Threat and Social Disturbance Hazards	132
17.1 Terrorism	133
17.1.1 Hazard Profile	133
17.1.2 Current Mitigation Efforts.....	134
17.2 Cyber Threats.....	135
17.2.1 Hazard Profile	135
17.2.2 Current Mitigation Efforts.....	137
17.3 Physical Threats.....	138
17.3.1 Hazard Profile	138
17.3.2 Vulnerability Assessment.....	139
17.3.3 Current Mitigation Efforts.....	139
18.0 Other Hazards.....	140
18.1 Air Pollution	140
18.1.1 Hazard Profile	140
18.1.2 Current Mitigation Efforts.....	144
18.2 Avalanches	145
18.3 Drought and Water Shortage.....	145
18.3.1 Hazard Profile	145
18.3.2 Current Mitigation Efforts.....	149
18.4 Hazardous Material Release	150
18.4.1 Hazard Profile	150
18.4.2 Exposure and Vulnerability	151
18.4.3 Current Mitigation Efforts.....	151
18.5 Oil Spill.....	151
18.5.1 Hazard Profile	151
18.5.2 Exposure and Vulnerability	152
18.5.3 Current Mitigation Efforts.....	153
18.6 Natural Gas Pipeline Hazards.....	155
18.6.1 Hazard Profile	155

18.6.2 Exposure and Vulnerability	155
18.6.3 Current Mitigation Efforts.....	155
18.7 Nuclear Hazards.....	157
18.7.1 Hazard Profile	157
18.7.2 Exposure and Vulnerability	157
18.7.3 Current Mitigation Efforts.....	158
18.8 Bird Strike	158
18.8.1 Exposure and Vulnerability	158
18.8.2 Current Mitigation Efforts.....	159
18.9 Pandemic	159
18.9.1 Hazard Profile	159
18.9.2 Assessment of Vulnerability.....	159
18.9.3 Current Mitigation Efforts.....	160
18.10 Supply Chain Hazards.....	160
18.10.1 Hazard Profile.....	160
18.10.2 Assessment of Vulnerability	161
18.10.3 Current Mitigation Efforts	163
19.0 Goals and Objectives	165
19.1 Authorities, Policies, Programs and Resources.....	165
19.2 Risk Prioritization	165
19.3 Existing Mitigation Strategies	166
19.4 Mitigation Action Plans.....	166
19.5 Plan Integration	167
20.0 Mitigation Best Practices and Adaptive Capacity.....	168
20.1 Progress of Mitigation Efforts	168
20.2 Change in Priorities	168
21.0 Action Plan and Implementation	170
21.1 Status of Previous Plan Actions	170
21.1.1 Mitigation Actions.....	170
21.1.2 Status of Plan Incorporation Actions.....	170
21.2 Plan Prioritization.....	171
21.2.1 Benefit/Cost Review	171
21.2.2 Grant Pursuit Priority	171
21.3 Mitigation Actions Implementation Plan.....	172

22.0 Plan Adoption, Implementation and Maintenance 179

22.1 Plan Adoption 179

22.2 Plan Implementation 179

22.3 Plan Maintenance 179

 22.3.1 Integration with Other Planning Processes..... 179

 22.3.2 Plan Evaluation and Monitoring..... 179

 22.3.3 Plan Update Method and Schedule..... 180

22.4 Continuing Public Involvement 180

22.5 Mitigation Plan Point of Contact..... 180

Table 1: 44 CFR Requirements Met.....	17
Table 2: Executive Risk Oversight Committee (EROC).....	21
Table 3: Risk Champion Network (RCN).....	21
Table 4: Core Team (CT).....	22
Table 5: Planning Committee.....	23
Table 6: Meeting and Coordination Summary	24
Table 7: Stakeholder and Agency Outreach	26
Table 8: Regional Participation.....	30
Table 9: Public Events and Communications	33
Table 10: Existing Plans Reviewed and Incorporated	35
Table 11: Plan Milestones	38
Table 12: Local Gas-Fired Plants.....	46
Table 13: Sacramento County Population Data by City	51
Table 14: Sacramento County Projected Population by Year	51
Table 15: Disaster Declaration by Incident for California and U.S	57
Table 16: Federal Disaster Declarations by County	57
Table 17: SMUD Hazards Comparison with California State Hazards in HMP	60
Table 18: Federal Disaster Declarations for California Pertaining to SMUD Plan Area.....	61
Table 19: Summary of Relevant Federal Agencies, Programs and Regulations.....	62
Table 20: Outreach Capability.....	65
Table 21: Hazards Assessment	69
Table 22: Large Wildfires near SMUD Plan Area from 1916 to Present	77
Table 23: Activities that Address Wildfire Risk Factors	79
Table 24: Current Wildfire Hazards Mitigation.....	81
Table 25: Current Wildland-Urban Interface Structural Fire Hazards Mitigation	88
Table 26: Selected List of Flood Events in SMUD Plan Area.....	90
Table 27: SMUD Owned Dams.....	95
Table 28: Failure of Spillways and Related Facilities Since 1990	99
Table 29: Current Water Rise Hazards Mitigation	99
Table 30: Counties Located Within Corresponding Earthquake Regions	103
Table 31: Active Faults in the Area Surrounding SMUD	104
Table 32: Active Faults by County	105
Table 33: Historical Volcanic Activity	111
Table 34: Current Geological Hazards Mitigation	112
Table 35: Severe Weather Guidance.....	113
Table 36: Monthly Average and Record Temperatures for Sacramento in Fahrenheit.....	114
Table 37: Recent Excessive Heat Events in SMUD Plan Area.....	117
Table 38: Fog Events in Sacramento County	118
Table 39: Severe Weather Events in Sacramento County Since 1950	119
Table 40: Recent Extreme Wind Hazards in SMUD Plan Area	122

Table 41: Wind Events in Sacramento County Since 1993	123
Table 42: Record Tornadoes 1925 to Present	124
Table 43: Current Severe Weather Hazards Mitigation	125
Table 44: Estimated Cumulative Number of Dead Trees in California	126
Table 45: Current Tree Mortality Hazards Mitigation.....	128
Table 46: Current Energy Shortage Hazards Mitigation.....	129
Table 47: Current Climate Change Hazards Mitigation.....	131
Table 48: Potential Methods of Terrorist Attacks	133
Table 49: Current Terrorism Hazard Mitigation	134
Table 50: Current Cyber Threat Hazards Mitigation.....	137
Table 51: Current Physical Hazards Mitigation.....	139
Table 52: Statewide Criteria Air Pollutant Emissions (tons/day, annual average).....	141
Table 53: Current Air Pollution Hazards Mitigation	144
Table 54: Drought Categories.....	145
Table 55: Historical Droughts in California	146
Table 56: Selected List of Drought Events in SMUD Plan Area	147
Table 57: Current Drought Hazards Mitigation	150
Table 58: Current Hazardous Materials and Oil Spill Hazards Mitigation.....	153
Table 59: Current Radiological Hazards Mitigation	156
Table 60: Current Radiological Hazards Mitigation	158
Table 61: Current Bird Strike Hazards Mitigation	159
Table 62: Current Pandemic Hazards Mitigation	160
Table 63: Current Supply Chain Hazards Mitigation.....	163
Table 64: Status of Prior Mitigation Actions.....	170
Table 65: Mitigation Actions Implementation	172
Table 66: Table of Acronyms	181

Figure 1: Map of SMUD’s Service Territory by Ward	40
Figure 2: California Counties around SMUD Service Area (Northern California)	41
Figure 3: SMUD Generation Resources.....	42
Figure 4: Map of UARP.....	44
Figure 5: Solano Wind Project.....	45
Figure 6: SMUD Local Pipeline	48
Figure 7: Sustainable Communities Resource Priorities Map	53
Figure 8: Sacramento Local Unemployment Rate Since the Pandemic	55
Figure 9: Unemployment Rates for the Nation and Selected Areas	56
Figure 10: Disaster Declaration by Incident for SMUD Plan Area	57
Figure 11: SMUD’s Service Area within CPUC Fire-Threat Map	73
Figure 12: CPUC Tier 2 and Tier 3 areas for SMUD’s UARP	75
Figure 13: SMUD Vegetation Management	81
Figure 14: Fire Hazard Levels in Sacramento County	85
Figure 15: CAL Fire - Fire Threat Predictions around SMUD Service Area.....	86
Figure 16: CPUC High Fire Threat around SMUD Service Area	87
Figure 17: 2021 Sacramento County Flood Protection Zones	94
Figure 18: FEMA 100- & 500-Year Flood Plains around SMUD Service Area	97
Figure 19: Rancho Seco Inundation Map	98
Figure 20: Earthquake Shaking Hazards around SMUD Service Area	103
Figure 21: Fault Activity Map Surrounding the Sacramento Region.....	106
Figure 22: California Earthquake Probabilities.....	106
Figure 23: Known and Potential Subsidence Areas in Sacramento County.....	108
Figure 24: California Active and Hazard Volcanoes	111
Figure 25: Historical Annual Mean Temperature for Sacramento	115
Figure 26: Heat Index Chart and the Potential Effects of Heat on the Body	116
Figure 27: Wind Zones in the United States	121
Figure 28: 2017 Aerial Detection of Tree Mortality in Northern California.....	127
Figure 29: Worst U.S States for Data Breaches - All Time.....	136
Figure 30: Average Number of Weekly Cyberattacks by Industry for 2020-2022	137
Figure 31: AirNow: Air Quality Sacramento Region.....	142
Figure 32: Purple Air: Air Quality Sacramento Region	143
Figure 33: California Percent Area in U.S. Drought Monitor Categories 2000 to 2023.....	147
Figure 34: SMUD Plan Area Drought Conditions for July 2016 as Classified by the U.S. Drought Monitor	149
Figure 35: Equipment Lead Time Changes	162
Figure 36: Equipment Lead Time Changes	162

Executive Summary

Natural and human-caused hazards have potential immediate and long-lasting impacts on the lives of people and their communities, financially, economically, and psychologically. Such hazards have the potential to disrupt entire communities. Nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters. This Hazard Mitigation Plan (HMP) represents the Sacramento Municipal Utility District's (SMUD's) commitment to reduce and eliminate, where possible, the potential risks and impacts of natural and human-created hazards. The HMP serves to help protect SMUD's assets, customers, and communities by improving disaster preparedness and increasing resiliency. It also serves as a guide for SMUD decisionmakers as they commit resources to reducing the effects of potential hazards on SMUD's energy infrastructure and workforce.

SMUD's HMP is a single-jurisdiction plan that geographically covers all areas where SMUD owns, partially owns, or operates critical infrastructure (hereinafter referred to as the Plan Area).

The HMP represents SMUD's commitment to reduce and eliminate, where possible, the risks and impacts of natural and human-caused hazards. The HMP serves to help protect SMUD's assets, customers, and communities by coordinating our broad-based disaster preparedness and resiliency efforts.

The HMP:

1. Identifies potential hazards faced by communities where SMUD maintains assets or operations,
2. Assesses the vulnerability of those assets and operations to such hazards, and
3. Identifies specific actions that can be taken to reduce the risk from identified hazards.

Plan Update

This plan is a comprehensive update of the 2019 SMUD Hazard Mitigation Plan, which was approved by FEMA on July 11, 2019, and is set to expire July 11, 2024.

SMUD's 2024-2028 HMP update meets federal requirements for updating hazard mitigation plans on a five-year cycle. It represents the third iteration of SMUD's hazard mitigation plan, which was initially part of El Dorado County's HMP. The scope of this HMP update covers 22 counties where SMUD owns, partially owns, or operates critical infrastructure. These counties include areas of Sacramento, El Dorado, Placer, Solano, Colusa, Yolo, Sutter, Alameda, Contra Costa, Glenn, Kings, Kern, Fresno, Merced, Modoc, San Joaquin, Santa Clara, San Bernardino, San Benito, Shasta, Siskiyou, Stanislaus, and Tehama counties.

Plan Update Approach

A governance structure was developed to coordinate the update of the HMP. It included Executive oversight, a director level steering committee, a planning committee, and core team, each with its own roles and responsibilities. The communications team implemented a multi-media public involvement strategy based on past experience, utilizing a number of outreach capabilities including posting public notices in local newspapers, community outreach events, sharing information with public agency partners, local non-profits and supporting agencies, as well as via email.

A draft of this plan was posted on smud.org for public comments in advance of the (date) SMUD (name) Committee Meeting and will be considered for approval by the SMUD Board of Directors within eight weeks of receipt of pre-approval from California Governor's Office of Emergency Services (Cal OES) and the Federal Emergency Management Agency (FEMA).

1.0 Introduction

1.1 Background

FEMA defines “hazard” as “any event or physical condition that has the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural losses, damage to the environment, interruption of business, or other types of harm or loss.” Additionally, hazard mitigation is “any sustained action taken to reduce or eliminate the long-term risk to human life and property from a hazard event” (44 CFR §201.2). The purpose of hazard mitigation is to reduce potential losses from future disasters. Hazard mitigation planning is essential in helping to reduce or alleviate the loss of life, personal injury, and property damage that can result from a disaster. A hazard mitigation plan forms the foundation of a community’s long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repetitive damage. The “purpose of mitigation planning is for state, local and Indian tribal governments to identify the natural hazards that impact them, to identify actions and activities to reduce any losses from those hazards, and to establish a coordinated process to implement the plan, taking advantage of a wide range of resources” (44 CFR § 201.1(b)).

The Disaster Mitigation Act of 2000 (DMA 2000) is federal legislation that establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). DMA 2000 sets as a condition for receiving federal disaster grant assistance, that state and local government agencies need to have a Federal Emergency Management Agency (FEMA) approved hazard mitigation. DMA 2000 outlines the process that cities, counties, and special districts follow to develop a Hazard Mitigation Plan (HMP).

FEMA supports local hazard mitigation planning and the achievement of the following principles:

- Plan and invest for the future;
- Collaborate and engage early; and
- Integrate community planning.

1.2 Mitigation Plan Update

SMUD has prepared this update to the 2019 Hazard Mitigation Plan in accordance with the requirements under DMA 2000. The HMP update was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 (Public Law 106-390) and the implementing regulations set forth by the Interim Final Rule published in the Federal Register on February 26, 2002, (44 CFR §201.6) and finalized on October 31, 2007. The regulations established the requirements that local hazard mitigation plans must meet in order for a local jurisdiction to be eligible for funding from certain Stafford Act grant programs such as FEMA’s Hazard Mitigation Grant Program (HMGP), the Pre-Disaster Mitigation Assistance (PDM) Program, the Flood Mitigation Assistance (FMA) Program, the Fire Management Assistance Grant (FMAG), and Public Assistance (PA). This planning effort follows FEMA’s 2023 Local Mitigation Planning Policy Guide (FP 206-21-0002).

1.3 Purpose

This HMP represents SMUD’s commitment to reduce the potential risks and impacts of natural and human-caused hazards and serves to help protect SMUD’s, customers, and communities by improving disaster preparedness and increased resiliency. It also serves as a guide for SMUD decision-makers as they commit resources to reducing the effects of potential hazards on SMUD’s energy infrastructure and workforce. The scope of this HMP is limited to the geographic areas of Sacramento, El Dorado, Placer, Solano, Colusa, Yolo, Sutter, Alameda, Contra Costa, Glenn, Kings, Kern, Fresno, Merced, Modoc, San Joaquin, Santa Clara, San Bernardino, San Benito, Shasta, Siskiyou, Stanislaus, and Tehama counties where SMUD owns, partially owns, or operates critical infrastructure facilities. These facilities include, but are not limited to, commercial property, real estate, dams, powerhouses, transmission lines, distribution lines, roads, wind turbines, solar arrays, batteries, and gas pipelines. Each of these facilities is critical to maintaining the flow of power from generating facilities through the transmission lines into Sacramento County. The proper maintenance of these assets helps protect the communities from impacts as a result of natural and man-made hazards such as wildfires, severe storms, dam failure, blackouts, and road closures to name a few.

SMUD’s resiliency can be improved through the proper identification, analysis, planning, and evaluation of proper risk response or mitigation and monitoring of the hazards to which SMUD is most vulnerable. This HMP provides a framework to conduct such an assessment.

This SMUD 2024-2028 HMP Update (is as a single-jurisdiction plan that geographically covers all areas where SMUD directly owns and/or has an ownership and/or operational share of critical infrastructure (hereinafter referred to as the Plan Area). Several stakeholders, including public and private agencies, participated in the planning process.

Information in this plan will be used to help guide and coordinate mitigation activities for SMUD. Proactive mitigation planning will help reduce the cost of disaster response and recovery to communities and their residents by protecting critical facilities, reducing liability exposure, and minimizing overall customer and community impacts and disruptions.

1.4 Contents of Updated Plan

This HMP is organized into four primary parts:

- Part 1 – Planning Process and Community Profile
- Part 2 – Risk Assessment
- Part 3 – Mitigation Strategy
- Part 4 – Plan Maintenance

Each part includes elements required Title 44 Code of Federal Regulations (CFR) Section 201.6, *Local Mitigation Plans*. Compliance section requirements are cited at the beginning of subsections where appropriate to demonstrate compliance.

2.0 Updates to Plan

2.1 Previous Plans

On September 21, 2017, through SMUD Board Resolution 17-09-09, SMUD's Board of Directors adopted the El Dorado County Local HMP Annex (Annexation Plan). The Annexation Plan focused on SMUD's assets located in El Dorado County and addressed wildland fire, severe storms, and dam/levee failure hazards.

In June 2018, SMUD received grant funding from FEMA under Disaster Recovery (DR) number 4308 to develop its first single-jurisdiction HMP which included additionally identified hazards and a greater planning area. This plan was adopted by SMUD's board June 24, 2019, by Board Resolution 19-06-06. The plan was approved by FEMA on July 11, 2019 and expires July 11, 2024.

2.2 Update

2.2.1 Grant Funding

On August 21, 2023, SMUD received grant funding from FEMA under DR-4619-469-007P to update its HMP in accordance with DMA 2000 requirements. The funding was used in the development of this 2024-2028 HMP.

2.2.2 Federal Eligibility

Part 44 of the Code of Federal Regulations (CFR) stipulates that a jurisdiction covered by a plan that has expired is not able to pursue federal funding for which a current hazard mitigation plan is a prerequisite. SMUD anticipates continuing to pursue FEMA grant funding for various hazard mitigations where a Plan is a prerequisite.

2.2.3 Changes in Development

SMUD continually identifies and assesses changes and developments that could impact or change the levels of risks associated with hazards prone to our planning area. This helps to ensure that mitigation strategies continue to address the risks and vulnerabilities of potential development and takes into consideration possible future conditions that could impact the hazard risk profiles allowing SMUD to allocate resources more efficiently to address SMUD's highest areas of vulnerabilities.

2.3 What Has Changed

SMUD's 2024-2028 HMP includes several changes including format changes for readability and citation of requirements to demonstrate compliance with CFR Part 44. The following are some highlights of additional changes:

- Enhanced risk assessment,
- Enhanced integrated risk and enterprise business planning,
- Updated and enhanced public outreach,
- Incorporation of SMUD's Zero Carbon Plan,
- Enhance communications to address vulnerable communities,
- Identification of high hazard dams, and
- Enhanced section on climate change.

Table 1: 44 CFR Requirements Met

44 CFR Requirement	Sections in 2024-2028 HMP	Comments
§ 201.6(c)(1): Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction?	3.1 Governance and Planning Team 3.7 Plan Milestones	
§ 201.6(b)(2): Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and non-profit interests to be involved in the planning process?	3.3 Stakeholder and Agency Coordination 3.4 Regional Participation	
§ 201.6(b)(1): Does the plan document how the public was involved in the planning process during the drafting stage and prior to plan approval?	3.5 Public Involvement	
§ 201.6(b)(3): Does the plan describe the review and incorporation of existing plans, studies, reports and technical information?	3.6 Existing Documents and Programs 9.0 Regulations and Programs 9.1 Federal and State	
§ 201.6(c)(2)(i): Does the plan include a description of the type, location and extent of all natural hazards that can affect the jurisdiction? Does the plan also include information on previous occurrences of hazard events and on the probability of future hazard events?	8.1 Disaster Declaration 10.2 Risk Assessment Approach	

Table 1: 44 CFR Requirements Met

44 CFR Requirement	Sections in 2024-2028 HMP	Comments
§ 201.6(c)(2)(ii): Does the plan include a summary of the jurisdiction’s vulnerability and the impacts on the community from the identified hazards? Does this summary also address NFIP insured structures that have been repetitively damaged by floods?	9.3 NFIP Compliance 10.2 Risk Assessment Approach	Previously damaged by floods: Slab Creek Powerhouse
§ 201.6(c)(3): Does the plan document each jurisdiction’s existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs?	9.0 Regulations and Programs 9.1 Federal and State	
§ 201.6(c)(3)(ii): Does the plan address each jurisdiction’s participation in the NFIP and continued compliance with NFIP requirements, as appropriate?	9.3 NFIP Compliance	
§ 201.6(c)(3)(i): Does the plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards?	21.0 Action Plan and Implementation	
§ 201.6(c)(3)(ii): Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure?	3.2 Defining Planning Area 21.0 Action Plan and Implementation	
§ 201.6(c)(3)(iii) & § 201.6(c)(3)(iv): Does the plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented and administered by each jurisdiction?	19.2 Risk Prioritization 21.3 Action Plan Prioritization	

Table 1: 44 CFR Requirements Met

44 CFR Requirement	Sections in 2024-2028 HMP	Comments
§ 201.6(c)(4)(iii): Is there discussion of how each community will continue public participation in the plan maintenance process?	22.4 Continuing Public Involvement	
§ 201.6(c)(4)(i): Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating, and updating the mitigation plan within a five-year cycle)?	22.3 Plan Maintenance 22.4 Continuing Public Involvement	
§ 201.6(c)(4)(ii): Does the plan describe a process by which each community will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate?	4.9 SMUD Capital Projects	
§ 201.6(d)(3): Was the plan revised to reflect changes in development?	2.2.3 Changes in Development	
§ 201.6(d)(3): Was the plan revised to reflect changes in priorities and progress in local mitigation efforts?	20.1 Progress of Mitigation Efforts 20.2 Change in Priorities	
§ 201.6(c)(5): For single-jurisdictional plans, has the governing body of the jurisdiction formally adopted the plan to be eligible for certain FEMA assistance?	22.1 Plan Adoption	SMUD had a single-jurisdictional plan
§ 201.6(c)(5): For multi-jurisdictional plans, has the governing body of each jurisdiction officially adopted the plan to be eligible for certain FEMA assistance?	This is a single jurisdiction plan	This is a single jurisdiction plan
HHPD1: Did the plan describe the incorporation of existing plans, studies, reports, and technical information for HHPDs?	12.6 Dam Failure	

44 CFR Requirement	Sections in 2024-2028 HMP	Comments
HHPD2: Did the plan address HHPDs in the risk assessment?	12.6 Dam Failure	
HHPD3: Did the plan include mitigation goals to reduce long-term vulnerabilities from HHPDs?	12.6 Dam Failure: Current Mitigation Efforts	
HHPD4: Did the plan include actions that address HHPDs, and prioritize mitigation actions to reduce vulnerabilities from HHPDs?	12.6 Dam Failure: Current Mitigation Efforts	

3.0 Planning Process

This section describes the first step of the HMP planning process - organize resources. Organizing resources includes building the core planning team, determining the outreach plan, and documenting review.

The planning process accomplished several critical HMP requirements, including identifying the Plan Area, defining general priorities, reviewing the capabilities of the communities within SMUD’s Plan Area, and establishing stakeholder and community outreach and input process. Strategies in developing the continuity of public participation in plan maintenance were also established, as well as means of properly documenting all future changes and updates to the HMP.

3.1 Governance and Planning Team

SMUD’s Enterprise Risk Management Office is responsible for updating the HMP, its Enterprise Risk Manager assumed the role of lead planner and leveraged SMUD’s existing risk governance structure to assist in the update of this HMP. This governance structure includes Executive oversight, senior management steering committee, a core team, and a planning committee.

3.1.1 Executive Risk Oversight Committee (EROC)

The Enterprise Risk Oversight Committee (EROC) is made up of SMUD Executives and is chaired by the Chief Financial Officer who is responsible for enterprise-wide risk oversight. During the HMP process, the EROC is responsible for the oversight, direction.

Table 2: Executive Risk Oversight Committee (EROC)

Name	Title	Role
Jennifer Davidson	Chief Financial Officer	Chair
Brandy Bolden	Chief Customer Officer	Member
Farres Everly	Chief Marketing and Communications Officer	Member
Frankie McDermott	Chief Operating Officer	Member
Jose Bodipo-Memba	Chief Diversity Officer	Member
Laura Lewis	Chief Legal and Government Affairs Officer and General Counsel	Member
Lora Anguay	Chief Zero Carbon Officer	Member
Scott Martin	Chief Strategy Officer	Member
Suresh Kotha	Chief Information Officer	Member

3.1.2 Risk Champion Network (RCN)

The Risk Champion Network (RCN) is a team of Directors who report directly to an Executive and represents various business areas across SMUD. The Core Team leverage this existing network to serve as the steering committee for this update. The RCN serves as a peer review group, providing input for the improvement of risk management practices across SMUD and drives risk informed decision making. Under the guidance of the Chief Financial Officer (CFO) and Chief Strategy Officer (CSO), the RCN promotes an interconnected risk management approach, assists in identifying common or overlapping risks, and encourages effective collaboration to streamline risk related activities across SMUD. During the HMP process, the RCN served as a senior leadership steering committee responsible for providing strategic direction, vetting activities being recommended to the EROC, and review of the HMP. Members of the RCN are outlined in table 3.

Table 3: Risk Champion Network (RCN)

Name	Title	Role
Russell Mills	Director, Treasury and Risk Management	Chair
Antiwon Jacobs	Director, Cybersecurity	Member
Bryan Swann	Director, Resource Strategy	Member
Cara Chatfield	Director, Marketing and Corporate Communications	Member
Casey Fallon	Director, Procurement, Warehouse, and Fleet	Member
Lucas Raley	Interim Director, Line Assets	Member
Ellias van Ekelenburg	Director Environmental Safety and Real Estate	Member
James Leigh-Kendall	Director, Reliability, Compliance, and Coordination	Member
Joel Ledesma	Director, Power Generation	Member
Laurie Rodriguez	Director, People, Services, and People	Member
Tracy Carlson	Director, Customer Operations	Member

3.1.3 Core Team

The Core Team (CT) is a smaller team from core areas of the organization. They are responsible for project leadership, providing strategic direction to the planning team as agreed upon by Seniors Leaders via the EROC and RCN. They are also responsible for monitoring the progress of key project deliverables, making daily decisions about project course corrections, ensuring compliance with DMA 2000 requirements, and managing federal funding and scope change. Members of the project management team were also a part of the planning committee. CT members are identified in table 4.

Name	Title	Role
Toni Hoang	Enterprise Risk Manager	Project lead; alignment of HMP to enterprise risk management and business processes.
Joy Mastache	Senior Attorney	Legal lead; ensuring compliance with DMA and state requirements as well as strategic legal direction.
Patrick Garvey	Manager, Civil Engineer	Subject matter expert; alignment of HMP to operational plans and processes.
Daniel Driscoll	Supervisor, Health, and Safety	Subject matter expert; alignment of HMP to operations and processes.
Matthew Sisneros	Risk Management Analyst	HMP information coordination and HMP formatting.

3.1.4 Planning Committee

The Planning Committee (PC) consisted of key decision makers from many operational functions across SMUD. The PC directly contributed to project decision-making processes. This includes:

- Attending meetings.
- Collecting and providing requested data.
- Decisions on plan process and content.
- Development of mitigation actions for the HMP.
- Review and comment on plan drafts.
- Coordination of the public input process

The preparation of the HMP required a series of meetings intended to facilitate discussion and initiate data collection efforts among the business areas. More importantly, these meetings and workshops prompted continuous input and feedback throughout the process. Table 5 below provides a list of the HMP PC members.

Table 5: Planning Committee

Date	Title	Meeting Objective
Anna Marie Will	Insurance Program Manager	Treasury & Risk Management
Antoinette Benson	Emergency Preparedness & Enterprise Continuity Program Manager	Facilities, Security Operations & Emergency Preparedness & Enterprise Continuity
Blake Richardson	Public Information Specialist	Corporate Communications
Brad Gacke	Rancho Seco Assets Manager	Nuclear Operations Fuel
Christopher Broyhill	Emergency Preparedness Specialist	Facilities, Security Operations & Emergency Preparedness & Enterprise Continuity
Dan Driscoll	Supervisor, Health & Safety	Environmental Safety & Real Estate
Daniel Stricklin	Manager Hydro Generation Assets	Hydro Generation Management
Darold Perry	Supervisor, Hydro License Implementation	Power Generation Design
Darrel Daniel	Vegetation Management Program Manager	Grid Assets
David Hanson	Project Manager II	Hydro Power Generation
David Lighten	Manager, Security Operations	Facilities & Security Operations
David Soule	GIS Systems Manager	Grid Planning & Operations
Dudley McFadden	Principal Civil Engineer	Hydro Generation Design
Eric Brown	Vegetation Management Manager	Grid Assets
Eric Hull	Regulatory Compliance Program Manager	Reliability and Compliance
Ernie Miller	Manager, Rancho Seco Assets	Power Generation Management
Francis Christensen	Gas Pipeline Assets Manager	Power Generation Management
Gary Ferguson	Strategic Business Planner	Community Relations Outreach & Support
Gretchen Hildebrand	Senior Land Specialist	Real Estate Asset Management
Hieu Nguyen	Principal Financial Accountant	Accounting
Jade Dorsey	Office Technician	Treasury and Risk Management
James Frasher	Manager Economic Development and Partnership	Zero Carbon Energy Solutions
Jenna Lesch	Manager, Customer Strategy & Operations	Customer & Community ServicesCare
John Larsen	Facilities Manager	Facilities
Jordan Monier	Fire Protection Specialist	Facilities and Security Operations
Josh Kretchman	Cybersecurity Program Manager	Information Technology
Joy Mastache	Senior Attorney	Legal Counsel
Joyce Hribar	Manager, Operational PMO	Zero Carbon Energy Solutions
Kathleen Ave	Senior Strategic Business Planner	Distributed Energy Strategy
Kim Rikalo	Manager, Program Delivery	Customer & Community Services
Lucas Raley	Interim Director Line Assets	Energy Delivery
Matthew Giovannoni	Dam Safety Engineer	Hydro Generation Design
Matthew Sisneros	Risk Management Analyst	Treasury & Risk Management

Table 5: Planning Committee

Date	Title	Meeting Objective
Michelle Ramos	Program Manager, System Operations and Reliability	Transmission Planning & Operations
Parikshat Pathak	Supervising Principal Distribution Systems Engineer	Transmission & Distribution Maintenance Planning
Patrick Garvey	Manager, Civil Engineering	Substation
Ryan Von Sossan	Strategic Account Advisor	Community Development
Shiloh Costello	Manager, Sustainable Communities	Workforce, Diversity & Inclusion

3.1.5 Internal Meeting and Coordination

The various teams met throughout the planning and development of the HMP. Table 6 provides a summary of the meetings conducted throughout the planning process. Meeting documentation and other relevant handouts are provided in Appendix B.

Table 6: Meeting and Coordination Summary

Date	Team/Title	Meeting Objective
August 24, 2023	Chief Financial Officer	Email to CEO and EROC on notice of award
August 29, 2023	Director, Treasury and Risk Management	Email to Directors on notice of award and resource needs
August 29, 2023	Enterprise Risk Manager	Email to Directors recommending subject matter experts (SMEs) to serve on planning committee
September 7, 2023	Risk Champion Network	HMP kick-off
September 11, 2023	Core Team	HMP kick-off and planning
September 14, 2023	Planning Team	HMP kick-off and planning
September 21, 2023	Communications Plan Meeting	Develop communications plan
September 25, 2023	Core Team	Review status of SME updates and meeting schedules
October 2023	Hazards Risk Review Meetings	Review and update hazard information and risk assessments
October 26, 2023	Planning Team	Mid-way check point
November 8, 2023	Risk Champion Network	Mid-way check point draft plan overview
November 10, 2023	Enterprise Risk Oversight Committee	Status update on HMP and draft plan review
November 16, 2023	Planning Team	Review and finalize HMP for public comment

3.2 Defining Planning Area

The Planning Team met to review the 2019 identified Plan Area and to determine changes appropriate to reflect the intent of this plan. SMUD’s Plan Area geographically covers all areas where SMUD directly owns and/or has an ownership and/or operational share of critical infrastructure (hereinafter referred to as the Plan Area). These territories are mostly located in Sacramento, El Dorado, Placer, and Solano counties. However, other areas

where SMUD owns, is partial owner, or operates critical infrastructure includes small portions of Alameda, Colusa, Contra Costa, Fresno, Glenn, Kern, Kings, Merced, Modoc, San Benito, San Bernardino, San Joaquin, Santa Clara, Shasta, Siskiyou, Stanislaus, Sutter, Tehama, and Yolo counties. Current development does not impact SMUD’s plan, SMUD will continue to assess any potential impacts from future developments.

3.3 Stakeholder and Agency Coordination

The Plan must provide an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development as well as business, academia, and other private and non-profit interests to be involved in the planning process (44 CFR § 201.6(b)(2)).

Stakeholders (table 7) were invited to participate in the plan development via an email invitation on October 25, 2023. Throughout the year, SMUD staff works closely with local jurisdictions bodies in which infrastructure critical to SMUD’s operations exist and with regulatory bodies having authority over such infrastructure. Stakeholders received an e-mail invitation to also participate in the review of SMUD’s HMP.

A copy of the draft HMP was posted online during a public comment period. The public was invited to review and provide their input. The public comment period was from December 1, 2023, to January 2, 2024. Additionally, the public was given opportunities to provide comment at two duly noticed public meetings, the Board (name) Committee Meeting and Board Meeting on (dates)

Table 7: Stakeholder and Agency Outreach

Organization Name	Organization Name	Organization Name
Alameda Community Development Agency	El Dorado County Planning and Building Department	Reclamation District #755
Alameda County Fire Department	El Dorado Hills Community Services District	Reclamation District #2111
Alameda County Medical Center	El Dorado County	Reclamation District #800
Alameda County Sherriff's Office – Homeland Security & Emergency Services	El Dorado Hills Fire Department	Reclamation District #9
Alameda General Services Agency	El Dorado Irrigation District	Roseville Fire Chief
Alameda Public Health	Elk Grove Police Department	Sacramento Area Sewer District
Alameda Public Works Agency	Elk Grove Public Works	Sacramento City Fire Chief
America River Flood Control District	Elk Grove Water District	Sacramento County
America's Plumbing Co.	Elverta Joint Unified School District	Sacramento County Department of Agriculture
Arcade Creek Recreation and Park District	Environmental Coalition for Water Justice	Sacramento County Department of Airports
Area West Engineers, Inc	ESRI	Sacramento County Department of Transportation
Army Corps of Engineers	Fair Oaks Recreation and Park District	Sacramento County Department of Waste Management and Recycling
Aroche Union School District	Fair Oaks Water District	Sacramento County Department of Water Resources
Ascent Environmental	Fairway Napa Valley Insurance Services	Sacramento County Environmental Compliance Supervisor
Cal OES	FEMA	Sacramento County Environmental Management Department
CalFire	Finance of America Companies	Sacramento County Office of Emergency Services
California Central Valley Flood Control Association	Folsom Fire Chief	Sacramento County Planning Department
California Department of Food and Agriculture	Foster Morrison Consulting	Sacramento County Principal Civil Engineer
California Department of Transportation	Fruitridge Vista Water District	Sacramento County Sheriff's Department
California Department of Water Resources	GEI Consultants	Sacramento County Sustainability Manager

Table 7: Stakeholder and Agency Outreach

Organization Name	Organization Name	Organization Name
California Department of Water Resources Maintenance Area 9	Gillum Consulting	Sacramento Metro Fire District
California Environmental Protection Agency	Glenn County Planning and Public Works Agency	Sacramento Metropolitan Air Quality Management District
California Highway Patrol	Glenn County Planning and Public Works Agency	Sacramento Police Department
California Public Utilities Commission Director	Golden State Water Company	Sacramento Regional Water Authority
California State University Sacramento	Greene and Hemly	Sacramento Suburban Water District
California-American Water Company	Greyscale LLC	Sacramento Tree Foundation
Carmichael Recreation and Park District	Herald Fire District	Sacramento-Yolo Mosquito & Vector Control
Carmichael Water District	Howell Consulting	SAFCA
Center Unified School District	ILS Committee – Campus Commons	Safe Credit Union
Central Valley Flood Protection Board	Jeffrey Beck Insurance Services	San Benito County
Citrus Heights Water District	JTS Engineering Consultants	San Benito County Office of Emergency Services
City of Citrus Heights	Kaiser Permanente	San Bernadino County
City of Colusa	Kay Dix.	San Joaquin County
City of Elk Grove	KSN Inc.	San Jose Planning Department
City of Folsom	Larkspur Financial Services	Santa Clara County
City of Galt	Larsen Wurzel & Associates, Inc.	SBC Global Services
City of Galt Public Works	Live Oak Building Department	Shasta County Public Works
City of Isleton	Los Rios Community College District	Siskiyou County Office of Emergency Services
City of Placerville	Markin Family Properties LLC	Solano County Building Official
City of Placerville Police Chief	MBK Engineers	South Lake Tahoe Fire Chief
City of Rancho Cordova	Merced County HMP Lead	South Placer Fire Chief
City of Roseville	Modoc County Office of Emergency Services	Southgate Parks and Recreation
City of Sacramento	Modoc Sheriff	Stanislaus County Office of the Fire Warden
City of Sacramento Office of Emergency Services	National Oceanic and Atmospheric Administration	State Fire Marshall
City of Sacramento Police Department	Natomas Central Mutual Water Company	Stockton Fire Chief
City of South Lake Tahoe Fire Department	National Weather Service	Styrsky Insurance Agency

Table 7: Stakeholder and Agency Outreach

Organization Name	Organization Name	Organization Name
City of Vacaville	Office of Wildfire Preparedness and Resilience (OWPR)	Sutter Buttes Flood Control Agency
City of Vacaville Community Development Department	Olson Construction Inc.	Sutter County Emergency Management
City of Vacaville Department of Utilities Administration	Orange Vale Water Co.	Sutter County Fire Chief
City of Vacaville Fire Department	Pacific Coast Banking School	Sutter County Planning Manager
City Public Works Vacaville	Peden Properties	Sutter County Public Works
CivicWell	Placer County	Tehama County Board of Supervisors (District 3)
CMS Plumbing	Placer County Office of Emergency Services	Tehama County Public Works Department
Comcast	Porta Bella International	Tehama County Sheriff's Office/ Office of Emergency Services
Community Link Capital Region	Rancho Murieta Community Services District	Trincherro Family Estates
Cosumnes Fire Department	Reclamation District #1000	Twin Rivers Unified School District
County of Colusa Office of Emergency Services	Reclamation District #1002	UC Davis
County of Sacramento Office of Emergency Services	Reclamation District #1601	United States Forest Service
County of Sacramento Water Resources	Reclamation District #2110	Valley Vision
Courtland Fire Department	Reclamation District #3	VG Consulting
CSUS Emergency Management	Reclamation District #317	Wagner & Bonsignore, CCE
CWO-Law	Reclamation District #341	Walnut Grove Fire District
DCC Engineering	Reclamation District #349	Woodside Homeowners Association
Del Paso Manor Water District	Reclamation District #369	Yolo County
Dennis. G. Chappabitty (Attorney at Law)	Reclamation District #407	Yolo Fire Chief
EBI Consulting	Reclamation District #551	Yuba City Fire Department
El Dorado County Department of Transportation	Reclamation District #554	Yuba City Public Works
El Dorado County Fire Safe Council	Reclamation District #563	Yuba County
El Dorado County Office of Emergency Services	Reclamation District #744	Yuba County Public Works Department

3.4 Regional Participation

SMUD regularly participates in regional and local forums to collaborate on shared interest in various risks, emergency response and mitigation planning, and information sharing. These meetings are generally open meetings that include public input. Information from these meetings was used to inform, identify, and prioritize risks in this HMP. Table 8 summarizes examples of this participation.

SMUD's government affairs team is engaged in several efforts with regional stakeholders to discuss various hazards and climate resilience. These meetings are not public meetings. SMUD government affairs have also participated in discussions about regional climate resiliency with a group comprised of SACOG, AQMD, SacRT, SAFCA, RWA and El Dorado County Fire Council over the last year. These are not public meetings.

The SMUD Emergency Operation Center (EOC) may participate in planning exercises with other EOCs and first responders, those exercises are not a public forum.

Table 8: Regional Participation

Organization	SMUD’s Role	Description
<p>California Utilities Emergency Association (CUEA)</p>	<p>Board of Director</p>	<ul style="list-style-type: none"> • Established in 1952, CUEA is the largest utility emergency association in California. CUEA is located inside the State Operations Center (SOC) in Mather, California. • CUEA serves as the point of contact for critical infrastructure utilities, Cal OES, and other governmental agencies, before, during and after an event to facilitate communications and cooperation between member utilities and public agencies and with non-member utilities. • CUEA provides emergency response support whenever necessary for electric, petroleum pipeline, telecommunications, gas, water, and wastewater utilities. • CUEA supports utility emergency planning, mitigation, training, exercises, and education. • Under an established Memorandum of Understanding (MOU), CUEA both staffs and manages the State of California Utility Operations Center (UOC). CUEA is intended to provide support to the state. It serves as an active operational component of the State Operations Center (SOC) and Regional Emergency Operations Centers (REOCs) acting in the capacity of the Utilities Branch within the Operations Section. The SOC and REOC activate under the authority of California Standardized Emergency Management System (SEMS).

Table 8: Regional Participation

Organization	SMUD’s Role	Description
Capital Region Climate Readiness Collaborative (CRC)	Board Chair	<ul style="list-style-type: none"> • CRC is a multidisciplinary network of local and regional agencies, organizations, businesses, and associations working together to advance climate mitigation and adaptation efforts in each of their own communities throughout California’s Capital Region (El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba communities). • The goal of the CRC is to assist in the creation of an environment in which stakeholders from across different markets and jurisdiction boundaries can come together for regional cooperation in finding solutions to address shared challenges of drought, extreme heat, extreme weather events, wildfires, and more.
El Dorado County Fire Safe Council (EDCFSC)	Board of Director	<ul style="list-style-type: none"> • Established in 2001, the mission of EDCFSC is to protect the people of El Dorado County and their property from the effects of catastrophic wildfire with education, cooperation, innovation, and action.
North American Transmission Forum (NATF)	Member; Leads the vegetation management core team	<ul style="list-style-type: none"> • NATF members include investor-owned, state-authorized, municipal, cooperative, U.S. federal and Canadian provincial utilities. • NATF members share timely information, including lessons learned, to help improve the reliability and resiliency of the electric transmission system.

Table 8: Regional Participation

Organization	SMUD’s Role	Description
California Public Utility Commission (CPUC) fire threat map	Member of the Peer Development Panel (PDP)	<ul style="list-style-type: none"> • The CPUC initiated a proceeding to develop a statewide map depicting areas of elevated and extreme fire risk in California—the “High Fire Threat District.” • A multistep process was used to develop the statewide CPUC High Fire Threat District, including input from investor owned and publicly owned electric utilities, communications infrastructure providers, public interest groups, and local public safety agencies, California Department of Forestry and Fire Protection (CalFire), and other stakeholders. The map areas were available to the public for review and comment prior to approval. Primary responsibility for the development of the CPUC Fire Threat Map was delegated to PDP, a group of utility fire planning experts, and the Independent Review Team led by CalFire.

3.5 Public Involvement

The public must have had an opportunity to be involved in the current planning process during the drafting stage and prior to plan approval. The plan must document what the participation entailed, including how under-resourced communities and vulnerable populations within the planning area were provided an opportunity to be involved. The plan must document how public feedback was included throughout the planning process (44 CFR § 201.6(b)(1)).

3.5.1 Strategy

The Planning Team reviewed SMUD’s 2019 public involvement and identified a strategic approach to public involvement for the 2024-2028 HMP. This strategic approach was focused on:

- information sharing with the public on HMP planning and drafting process,
- having materials available at public outreach events for the general public with a focus on vulnerable communities, and
- updating SMUD’s HMP to reflect public outreach activities and participation.

3.5.2 Public Notice

SMUD provided notice in local newspapers during the planning stage and the draft review stage to welcome public input regarding the HMP update. These notices were published in the Sacramento Bee and the Mountain Democrat on the following dates: October 16, 2023, and December 1, 2023.

3.5.3 Public Events

SMUD leveraged its existing community outreach process and incorporated HMP update information sharing as part of community outreach events and communications. HMP information was available to attendees and SMUD staff was present to answer questions from the public and share information on the HMP website and email. Table 9 shows public events and communications that SMUD participated in.

Date	Description	Location	Type
10/28/2023	International Auto Show	Cal Expo	Community event
10/28/2023	Golden Harvest Parade & Festival	Downtown Sacramento	Community event
10/28/2023	The Hamptons: Autumn Festival	Natomas	Community event
10/28/2023	Mutual Assistance Network Harvest Festival	Roberson Community Center	Community event
10/28/2023	Climate Justice Festival	Roberson Community Center	Community event
10/28/2023	GNNA Dia de los Muertos	Stanford Settlement Neighborhood Center	Community event
10/29/2023	International Auto Show	Cal Expo	Community event
10/29/2023	ARTners Dia de los Muertos	Elk Grove	Community event
10/29/2023	Ankur Fall Festival	Downtown Sacramento	Community event
10/31/2023	Higher Heights Trunk or Treat	Arden Arcade	Community event
11/2/2023	LCAC Dia de los Muertos	Old Sacramento	Community event
11/4/2023	Sacramento Republic FC: Western Conf. Finals	Cal Expo	Community event
11/4/2023	Midtown Farmer's Market	Downtown Sacramento	Community event
11/4/2023	Broadway International Festival	Downtown Sacramento	Community event
11/4/2023	Latino Book & Family Festival	Meadowview	Community event
11/4/2023	Special Olympics	Cherry Island Soccer Complex	Community event
11/5/2023	Special Olympics	Cherry Island Soccer Complex	Community event
11/5/2023	1Love 1Heart Block Party	Oak Park	Community event
11/5/2023	Run the Parkway	American River Parkway	Community event
11/5/2023	Diwali Festival of Lights	Rancho Cordova	Community event
11/11/2023	Midtown Farmer's Market	Downtown Sacramento	Community event

3.5.4 Hazard Mitigation Plan Website and E-mail

During the development of SMUD's 2019 HMP, SMUD staff established a dedicated webpage and email to share information on SMUD's HMP. This webpage will continue to serve as a central location to keep the public apprised of upcoming outreach events, meeting dates and times, and the plan update process (see table 11). The webpage address is: smud.org/HazardMitigation and the email address is: ERM@smud.org. The webpage and email were included in all public notifications, public presentations, and outreach materials.

3.5.5 Public Comments on Draft Plan

In addition to the listed organizations in table 7, a draft copy of the HMP was made available to the public for review. The public was given opportunity to comment on the draft HMP.

- The draft HMP was made available on SMUD's website (smud.org) for public review from December 1, 2023, to January 2, 2024. Public comments are addressed in the final HMP.
- SMUD also provided an opportunity for public comments on the draft HMP at a regularly scheduled **Finance and Audit Committee Board Meeting¹**.
- **There were no comments received through the public review period.**

SMUD Board Committee meetings are open and accessible to the public. Meeting notices and agendas are posted, at minimum, 72 hours in advance at the SMUD office and on SMUD's website. Those who are unable to attend the meeting in-person can livestream the meeting or view a recording on SMUD's website.

SMUD is committed to public participation. In accordance with California open meeting laws (California Government Code Sections 54960 et. seq.) SMUD Board meetings are open to the public and the public is invited to comment at these meetings. The public will continue to be involved in future HMP updates. Prior to adoption of formal updates, SMUD will provide the opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment period and meeting logistics.

3.6 Existing Documents and Programs

The plan should describe the review and incorporation of existing plans, studies, reports, and technical information (44 CFR § 201.6(b)(3)). Linking existing plans and policies to the HMP helps to identify which resources already exist that can be used to implement the action items identified in the plan.

SMUD's plan includes a range of recommended action items that, when implemented, could reduce the Plan Area's vulnerability to natural hazards. Many of these recommendations are consistent with the goals and objectives of SMUD's existing plans and policies. Table 10 accounts for the plans and policies already in place in SMUD's Plan Area that were reviewed or incorporated as a part of the HMP planning process:

¹ The Finance and Audit Committee Board Meeting was held on (October 2, 2018) at 5:30 P.M. at 6301 S Street, Sacramento, CA 95817

Table 10: Existing Plans Reviewed and Incorporated

Title	Version	Author/Owner	Description
El Dorado County HMP Annex	2018 El Dorado MJ-HMP	El Dorado County and other agencies including SMUD	The Annexation Plan is a supplement to the 2017 El Dorado MJ-HMP. The purpose of the Annexation Plan is to identify specific hazards and mitigation strategies associated with the Upper American River Project (UARP) that may minimize the negative effects of such hazards on residents and property in the county, including SMUD’s critical energy infrastructure.
El Dorado County Community Wildfire Protection Plan	2017	El Dorado County Fire Safe Council	The El Dorado County Community Wildfire Protection Plan identifies risks, hazards, and past strategies for wildfire in the El Dorado County area.
Sacramento County HMP	2022	Sacramento County	SMUD participated along with various other Sacramento region stakeholders in the development of Sacramento County’s HMP.
Emergency Operations Plan	2020	SMUD	SMUD maintains an emergency operations plan which addresses SMUD’s preparedness and response policies and procedures for responding to, and recovering from, extraordinary emergency situations that could adversely affect business continuity and the capacity to safely generate, transmit, and distribute electric power to its customers.
SMUD Business Continuity Plans	2023	SMUD	Department Business Continuity Plans outline various measures for minimizing, mitigating, responding to, and recovering from events that can disrupt normal operations.
Climate Readiness Assessment and Action Plan		SMUD	The Climate Readiness Assessment and Action Plan is a continuation of SMUD’s existing climate change resiliency research and readiness planning. The purpose of the Plan is to discuss and provide a map of at-risk assets due to climate stressors. The Plan also provides SMUD’s ongoing action plan to address climate risks, including community engagement, enterprise-wide programs, capital investments and operational initiatives.

Table 10: Existing Plans Reviewed and Incorporated

Title	Version	Author/Owner	Description
Hydro Dam Failure Emergency Action Plan (EAP)		SMUD	The Dam Failure EAP identifies roles and responsibilities and describes methods used to identify unusual and unlikely conditions that may endanger SMUD’s hydropower dams in time to take mitigating action. As required by state and federal regulations, the EAP is reviewed annually and rewritten every five years, most recently in 2020.
Rancho Seco Dam EAP		SMUD	The Rancho Seco Dam EAP describes responsibilities for responding to a potential or actual failure of the dam. It includes facts about the dam and maps showing areas at risk of flooding following a dam failure, useful for emergency responders to direct resources. As required by the state regulator, the plan is reviewed annually and rewritten quinquennially.
Gas Pipeline Operations (GPO) EAP		SMUD	The GPO EAP addresses the delegation of responsibilities and the necessary procedures for safeguarding life and property while maintaining or restoring service in natural gas emergencies. The GPO EAP covers situations such as free gas detected in or near buildings, fire, or explosion near or involving the pipeline facilities, dig-ins, facility failures, insufficient pressure, and natural disasters or civil disturbances or potentially involving the pipeline facilities. This plan is reviewed and updated annually
GPO Preventative and Mitigative Measures		SMUD	The GPO Preventative and Mitigative Measures document describes the process for developing preventative and mitigative measures employed through SMUD’s Gas Pipeline Integrity Management Program. The intent of preventative and mitigative measures are to ensure public safety by preventing pipeline incidents and minimizing the impact of any potential pipeline incident.

Table 10: Existing Plans Reviewed and Incorporated

Title	Version	Author/Owner	Description
Wildfire Mitigation Plan	2023-2025	SMUD	<p>A 3-year wildfire mitigation plan that is reviewed and updated annually. The goal of the plan is to:</p> <ul style="list-style-type: none"> • Minimize the probability that SMUD’s transmission and distribution (T&D) system may be the origin or contributing source for the ignition of a wildfire; • Implement a wildfire mitigation plan that embraces safety, prevention, mitigation, and recovery as a central priority for SMUD; and • Create a WMP that is consistent with state law and objectives.
2030 Zero Carbon Plan	2021	SMUD	<p>The 2030 Zero Carbon Plan is a flexible road map to achieve SMUD’s zero carbon goal while ensuring all customers and communities it serves reap the benefits of decarbonization.</p>

Other Related Plans Specific to Fire Hazards

- United State Forest Service (USFS), Bureau of Land Management (BLM), CalFire, and other agency land use and resource management plans that may apply to the area,
- Fire Management, fire prevention, fire response, and fuel management plans prepared for local agencies,
- Agency management goals for implementation of fire prevention and response actions,
- Fire prevention and response plans prepared by other utilities to satisfy their FERC license requirements, and
- Fire behavior literature and scientific publications.

3.7 Plan Milestones

Several stakeholders, including public and private agencies, participated in the HMP planning process. Table 11 highlights some major milestones.

Table 11: Plan Milestones			
Date	Title	Description	Attendance
Sept. 7, 2023	RCN Meeting #1	<ul style="list-style-type: none"> • RCN input • Project overview, work plan, timeline, important milestones • RCN's roles and responsibilities • Discuss plan review, public outreach capabilities • Confirm natural hazards of interest 	In – person
Sept. 11, 2023	Core Team Meeting #1	<ul style="list-style-type: none"> • Project overview, timeline, important milestones • Core Team roles and responsibilities • Discuss plan review, public outreach process • Confirm hazards and Subject Matter Experts (SMEs) • Next Steps with Planning Team and coordination of communication with RCN and EROC 	Teams
Sept. 14, 2023	Planning Team Meeting #1	<ul style="list-style-type: none"> • Project overview, timeline, important milestones • Core Team roles and responsibilities • Discuss plan review, public outreach process • Confirm hazards and Subject Matter Experts (SMEs) 	Teams
Oct.16, 2023	Public outreach	Press release announcing the planning process, website, and email address inviting the public to participate in the planning process.	Sacramento Bee and Mountain Democrat
Oct. 25, 2023	Stakeholder outreach	E-mail and flier sent to stakeholders in table 7 announcing the update process and inviting stakeholders to participate in the planning process.	E-mail
Oct. 26, 2023	Planning Team Meeting #2	<ul style="list-style-type: none"> • Status update on work and outline action items for completing draft 1. 	Teams

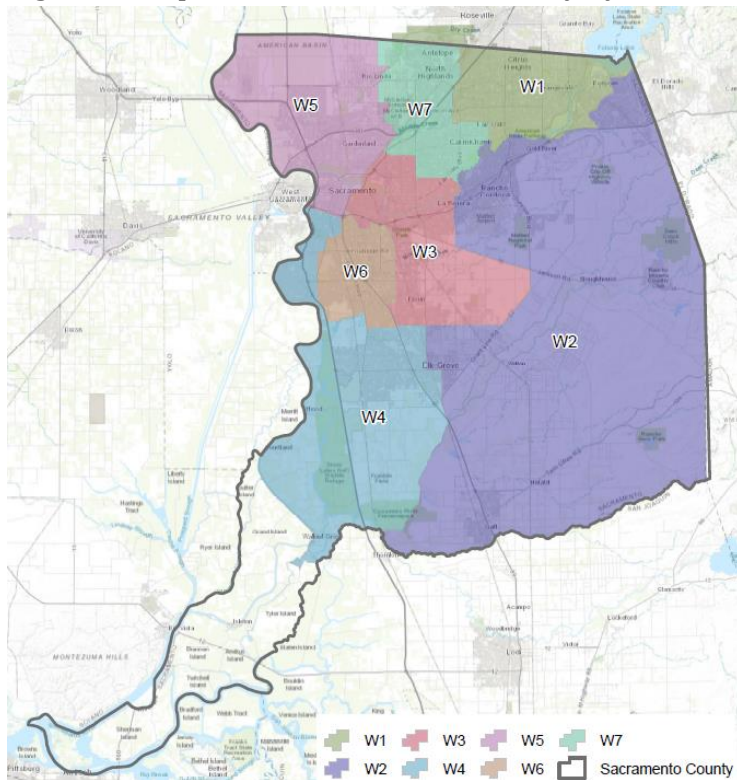
Table 11: Plan Milestones			
Date	Title	Description	Attendance
Nov. 8, 2023	RCN Meeting #2	<ul style="list-style-type: none"> • Draft Plan overview • Approve hazard response action plan • Discuss any public comments and plan integration • Overview of changes in 2024-2028 HMP Update 	In – person
Nov. 10, 2023	EROC Meeting #1	<ul style="list-style-type: none"> • Status update on 2024-2028 HMP activities • Discuss any public comments and plan integration • Overview of changes in 2024-2028 HMP Update 	Teams
Dec. 1, 2023	Public outreach	Press release announcing the beginning of the draft plan public comment period	Sacramento Bee and Mountain Democrat
Dec. 1, 2023	Stakeholder outreach	Email to stakeholders in table 7 inviting them to participate in the review of the draft plan	E-mail
	Public outreach	The public was given an opportunity to provide additional comments on the plan at the Board Committee Meeting	In – person and virtual
TBD	Submittal	Plan submitted to CalOES for review	e-mail
TBD	Approval pending adoption	Approval pending adoption received from FEMA	
TBD	Plan adopted by SMUD Board of Directors	Plan is finalized with SMUD Board’s adoption	
TBD	Final approval from FEMA	FEMA approval after SMUD Board adoption	

4.0 Planning Process

4.1 About SMUD

Headquartered in Sacramento, California, SMUD owns and operates an electric system that has provided retail electric service since 1946. SMUD generates, transmits, and distributes electricity within a 900-square-mile territory that includes the principal parts of Sacramento County, and a small adjoining portion of Placer County, see figure 1.

Figure 1: Map of SMUD's Service Territory by Ward



SMUD is the nation's sixth-largest community-owned electric utility, recognized internationally for its innovative energy efficiency programs and use of renewable power technologies. As a municipal utility, SMUD is governed by a seven-member popularly elected Board of Directors that determines policy and appoints the Chief Executive Officer and General Manager who is responsible for SMUD's overall management and operations. Today, SMUD's power supply is on average about 54 percent² carbon free and SMUD has a goal to reach zero carbon in its electricity production by 2030.

4.2 The Service Area

SMUD is the primary distributor of electric power within an area of approximately 900 square miles in central California. The service area includes Sacramento, the State Capital, the populous areas principally to the northeast and south of the City of Sacramento and the agricultural areas to the north and south.

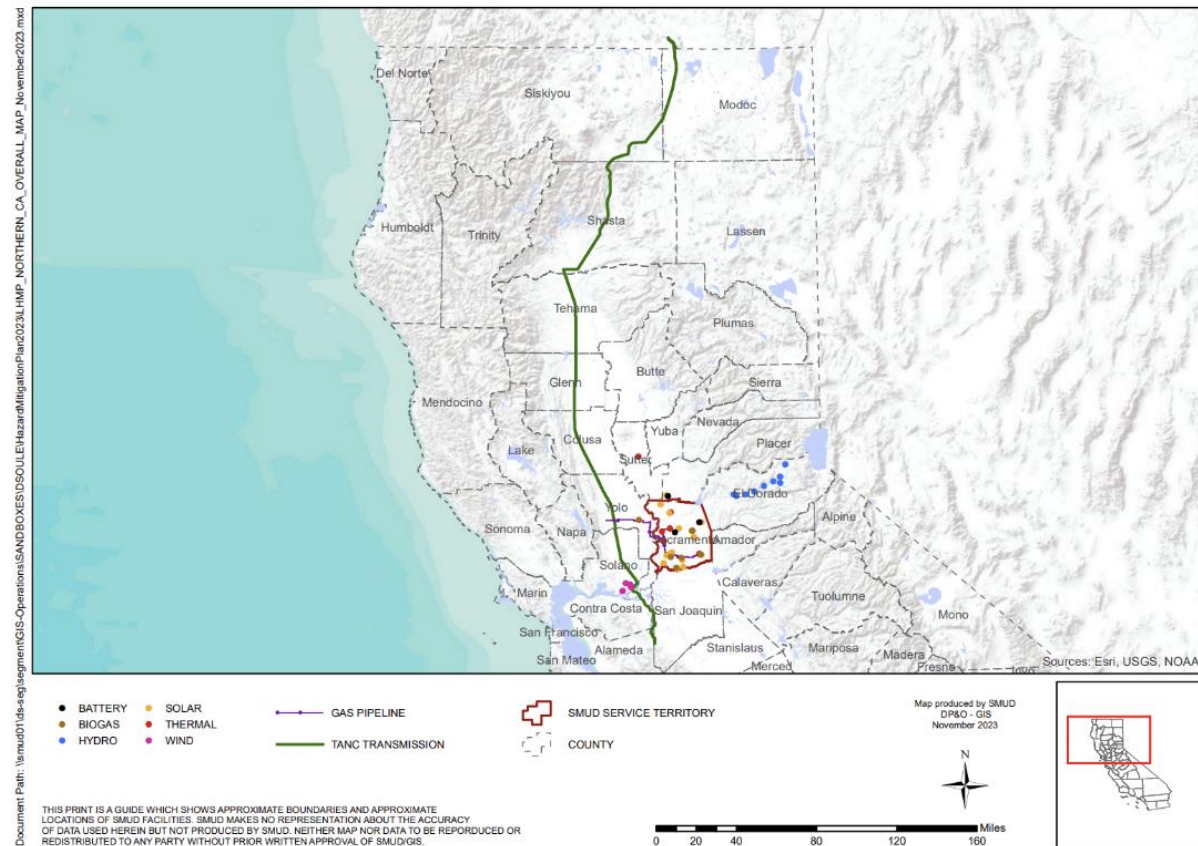
SMUD's electric system supplies power to a population of approximately 1.5 million with a total annual retail load of approximately 10,622 million kilowatt hours (kWh) for the year ended December 31, 2022. As the capital of the nation's most populous state, Sacramento benefits from the historically stabilizing influence of a large government sector.

²SMUD, 2022 Power Content Label, [smud.org/SMUDPCL](https://www.smud.org/SMUDPCL), October 25, 2023.

Sacramento is home to the State government headquarters, the Sacramento County seat, the city government and various special districts that combine to make government the largest single employment sector in the Sacramento area. Information technology, transportation, education and health services, leisure and hospitality and construction serve as the other major sectors of employment and industry in the area.

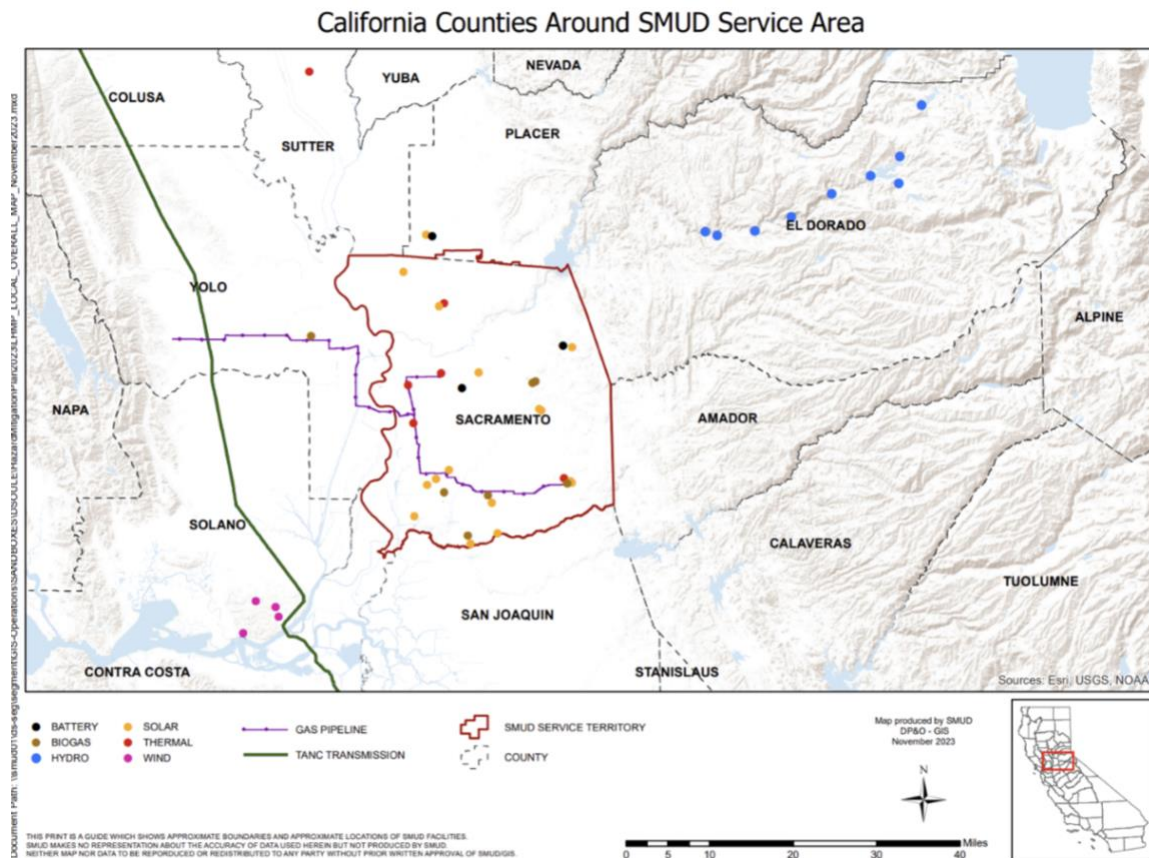
SMUD’s annual peak load has averaged 3,113 Megawatts (MW) over the three years 2020-2022, with SMUD’s record peak load of 3,299 MW occurring on July 24, 2006. In 2022, SMUD recorded its second highest peak load of 3,292 MW. SMUD reviews its load forecast, at a minimum, on an annual basis.³ Current and historical load statistics can be found at our website: [smud.org/en/Corporate/About-us/Company-Information/Reports-and-Statements](https://www.smud.org/en/Corporate/About-us/Company-Information/Reports-and-Statements)

Figure 2: California Counties around SMUD Service Area (Northern California)
SMUD Service Area and Counties of Northern California



³ Electric Revenue Bonds, 2023 Series K Official Statement, Page A-4, June 6, 2023.

Figure 3: SMUD Generation Resources



4.3 Purpose and Vision

SMUD’s Board of Directors has established the following purpose and vision statements: “SMUD’s purpose is to enhance the quality of life for our customers and community by providing reliable and affordable electricity, and leading the transition to a clean energy future.” “SMUD’s vision is to be a trusted and powerful partner in achieving an inclusive, zero carbon economy. SMUD will leverage its relationships to accelerate innovation, ensure energy affordability and reliability, protect the environment, eliminate greenhouse gas emissions, catalyze economic and workforce development, promote environmental justice, and enhance community vitality for all.”

4.4 Goal And Objectives

For more than 70 years, SMUD has provided safe, reliable and affordable electricity, excellent customer service, community value, innovation, and environmental leadership to its customers.

The Board has adopted a set of Strategic Directions (SD) with related metrics, which it considers essential in the continued success of the organization and its service to its customers. These include safety, reliability, competitive rates, Enterprise Risk Management, access to credit markets, customer relations, environmental leadership, and

resource planning. SMUD's Board SDs guide in the decisions we make about SMUD's policies and operations. The Board continually reviews and refines these guidelines to make sure it meets its customer's energy needs both now and in the future.

4.5 SMUD Priorities

Multiple risks and hazards have the potential to impact SMUD's operations. SMUD addresses these risks and hazards as a part of its ongoing Enterprise Risk Management and Insurance Programs activities and includes them in the capital investment prioritization process. Historical data indicates that wildfire, storms, floods, and earthquakes account for the greatest losses incurred by SMUD and should be designated as priority threats. In addition, climate change has the potential to increase the impacts of these hazards as well as others.

4.6 The Electric System

SMUD owns and operates an integrated electric system that includes generation, transmission, and distribution facilities. SMUD delivers energy to its customers from a variety of sources. The sources include large hydropower, natural-gas-fired generators, renewable energy (solar, wind, small hydro, geothermal, and biomass), and power it purchases on the wholesale market. The largest single source of power for SMUD is the Cosumnes Power Plant (described below). SMUD's UARP is its cleanest and most economical power source.

4.6.1 The Distribution and Transmission System, Sacramento County

SMUD supplies power to its bulk power substations through 230 kilovolt (kV) and 115 kV transmission systems. This system transmits power from SMUD's generation plants, and interconnects with Pacific Gas & Electric ("PG&E") and the Western Area Power Administration (WAPA). Power is distributed throughout Sacramento County via a 69 kV sub-transmission system except for the Sacramento downtown area, which is served from the 115 kV transmission systems. The downtown area is served from 115/12 kV and 115/21 kV substations. The distribution system serving the remainder of SMUD's service territory is comprised of 69/12 kV and 69 kV substations with overhead and underground distribution circuits.

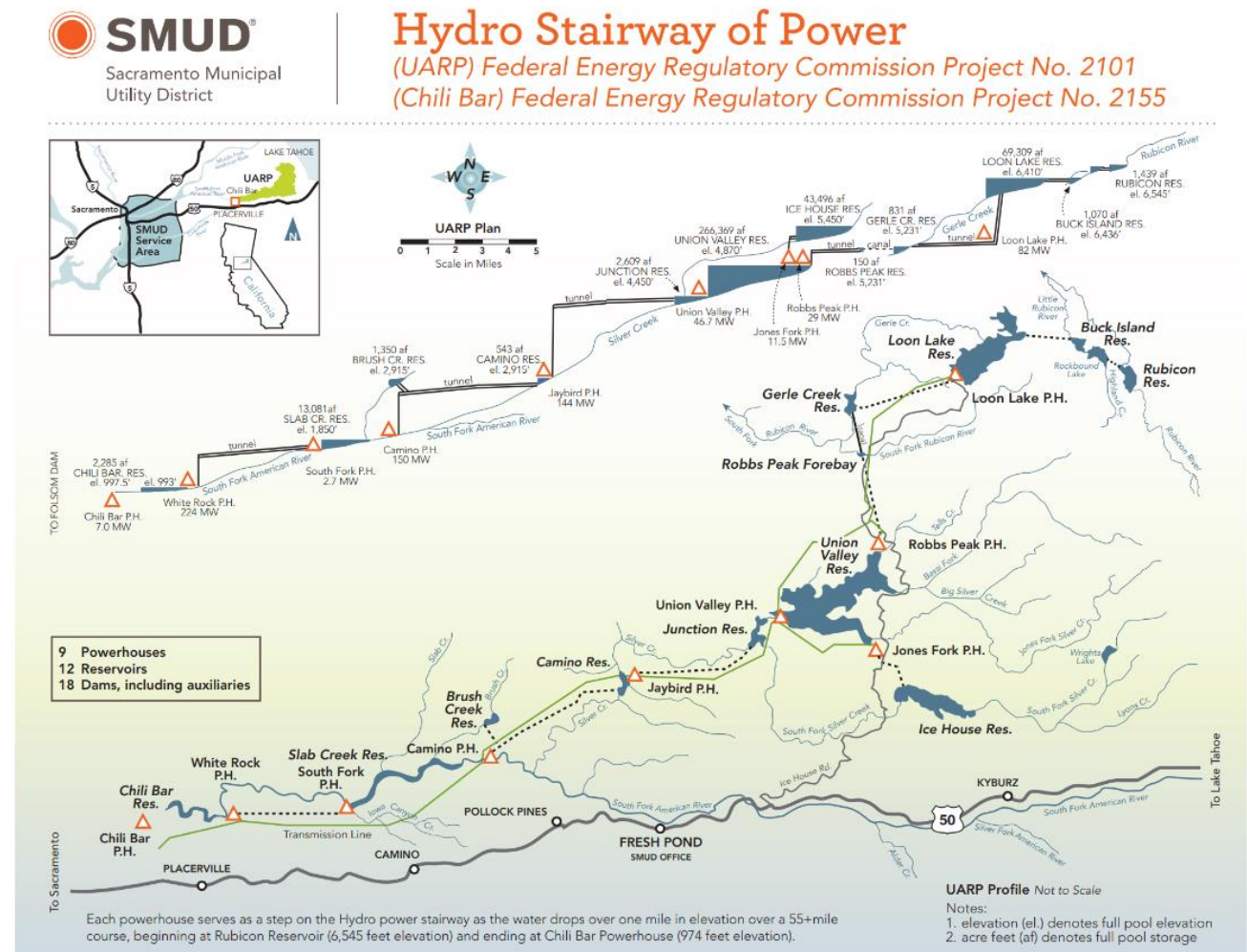
4.6.2 Hydroelectric System

SMUD's hydroelectric system includes nine SMUD-owned and operated hydroelectric powerhouses rated at approximately 700MW in the Western Sierra Nevada Mountain region. The hydroelectric systems span approximately 50 miles with the highest elevation reservoir at Rubicon Reservoir and descends the mountain range terminating at Chili Bar Powerhouse. All total there are nine hydroelectric powerhouses with seven of them interconnected with dedicated 69kV and 230kV transmission lines. The remaining two hydroelectric powerhouses South Fork and Chili Bar are interconnected directly into PG&E's 12kV and 21kV local distribution systems. Approximately twenty linear miles of overhead 230kV transmission lines connect the hydroelectric system to SMUD's service area near Folsom. The hydroelectric powerhouses are fed from the various dam-formed

reservoirs in the area. A small dedicated 4kV distribution system serves various valve and gate control houses for the reservoirs, a ranger station, a ski chalet, and a communication station. The 4kV distribution system is approximately five circuit miles in length. The 4kV system is not interconnected with PG&E’s distribution system that serves the area.

In addition to providing clean hydroelectric power and operating flexibility for SMUD, the UARP area provides habitat for fish and wildlife and a variety of recreational opportunities, including camping, fishing, boating, hiking, horseback riding, mountain biking and cross-country skiing, 52 developed recreation sites include campgrounds, day use facilities, boat launches, trails and a scenic overlook. Many of these developed recreation sites, as well as dispersed recreation areas within or immediately adjacent to the Project Boundary facilities, are accessed via one lane rural roads.

Figure 4: Map of UARP

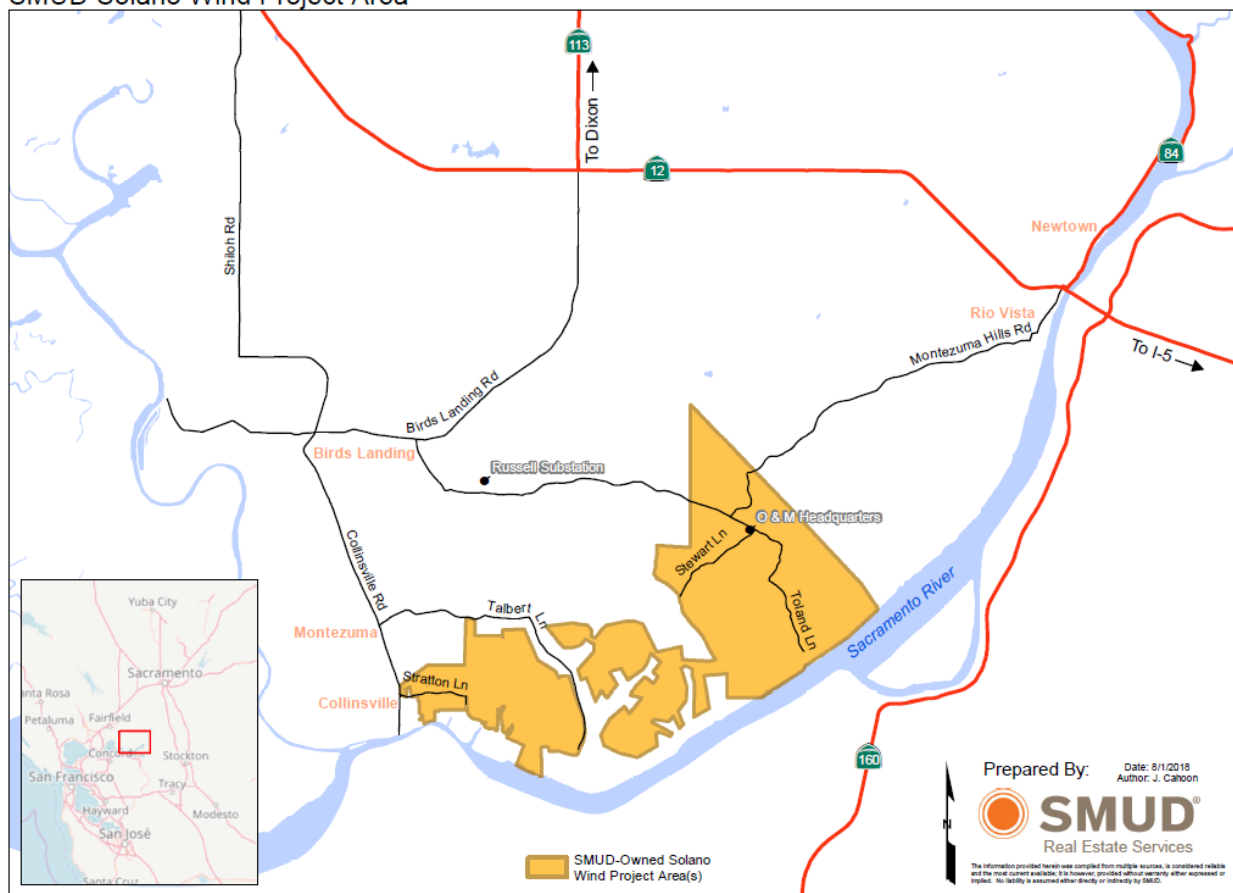


4.6.3 Wind Power

SMUD owns and operates a 300MW wind project, located in Solano County, known as The Solano Wind Project. The project consists of 103 wind turbine generators (WTG) spanning five miles southwest of Rio Vista. Energy from the project is collected at 21kV and 35kV and transmitted over a dedicated overhead and underground system to Russell substation. At Russell substation, the energy is stepped up to 230 kV and interconnected to PG&E's Birds Landing Switching Station.

Figure 5: Solano Wind Project

SMUD Solano Wind Project Area



4.6.4 Solar Photovoltaic

SMUD owns and operates approximately 1.5 MW of solar photovoltaic generating facilities. These facilities include installations at the Hedge Substation property, the Customer Service Center, the East Campus Operations Center, and other smaller photovoltaic systems throughout the service area on parking lots.

4.6.5 Local Gas-Fired Plants

SMUD owns five local natural gas-fired plants in its service area: the Central Valley Financing Authority (CVFA) Project, the Sacramento Cogeneration Authority (SCA) Project, the Sacramento Power Authority (SPA) Project, SPA McClellan and the SFA Project (each defined below). These five plants are referred to collectively as the “Local Gas-Fired Plants.” These plants are a strategic component of SMUD’s resource mix. In addition to providing SMUD a total capacity of approximately 1,012 MW, the Local Gas-Fired Plants provide SMUD with needed voltage support, operational and load following capability, and the reliability inherent in having power resources located close to loads. Table 12 provides an overview of the five Local Gas-Fired Plants.

Name	Capacity	Type	Description
The Cosumnes Power Plant (the “SFA Project”)	495 MW	Natural gas-fired, combined cycle plant	Located in the Southern portion of Sacramento County, adjacent to SMUD’s decommissioned Rancho Seco Nuclear Power Plant.
The CVFA Carson Cogeneration Project (the “CVFA Project”)	103 MW	Natural-gas-fired cogeneration project consisting of separate combined cycle and peaking plants	Provides steam to the Sacramento Regional County Sanitation District (“SRCSD”) wastewater treatment plant adjacent to the site.
The SCA Procter & Gamble Cogeneration Project (the “SCA Project”).	182 MW	Natural gas-fired cogeneration facility	Located in an established industrial area of Sacramento. The SCA Project produces steam for use in Procter & Gamble Manufacturing Company’s oleo chemical manufacturing processes and electricity for sale to SMUD.
The SPA Campbell Soup Cogeneration Project (the “SPA Project”)	180 MW	Natural gas-fired cogeneration project	Located in Sacramento, adjacent to the Capital Commerce Center (formerly the Campbell Soup Company food processing facility).
The SPA McClellan Gas Turbine (“SPA McClellan”)	72 MW	Natural gas-fired simple cycle combustion turbine generating	Located at McClellan Business Park in Sacramento. The turbine is connected to SMUD’s electric system and is operated to meet SMUD’s peak-load requirements. SPA McClellan is aligned for remote starting and operation with both black start and fast start capabilities.

4.6.6 Transmission

The transmission system carries electricity from generation to the distribution system over long distances at high voltages. SMUD supplies power to its bulk power substations through a 230 kV and 115 kV transmission systems. This system transmits power from SMUD's generation plants, other than the Solano Wind Project, and interconnects with Pacific Gas & Electric (PG&E) and the Western Area Power Administration (WAPA). Power is distributed throughout Sacramento County via a 69 kV sub-transmission system except for the Sacramento downtown area, which is served from the 115 kV transmission systems. The downtown area is served from 115/12 kV and 115/21 kV substations.

4.6.7 Distribution

Distribution systems move power from transmission to end use customers. The distribution assets consist of thousands of unique parts that are customary and usual for the operation of electric distribution systems. The distribution system serving the remainder of SMUD's service territory is comprised of 69/12 kV and 69/4 kV substations with overhead and undergrounds distribution circuits.

4.7 Gas Pipeline

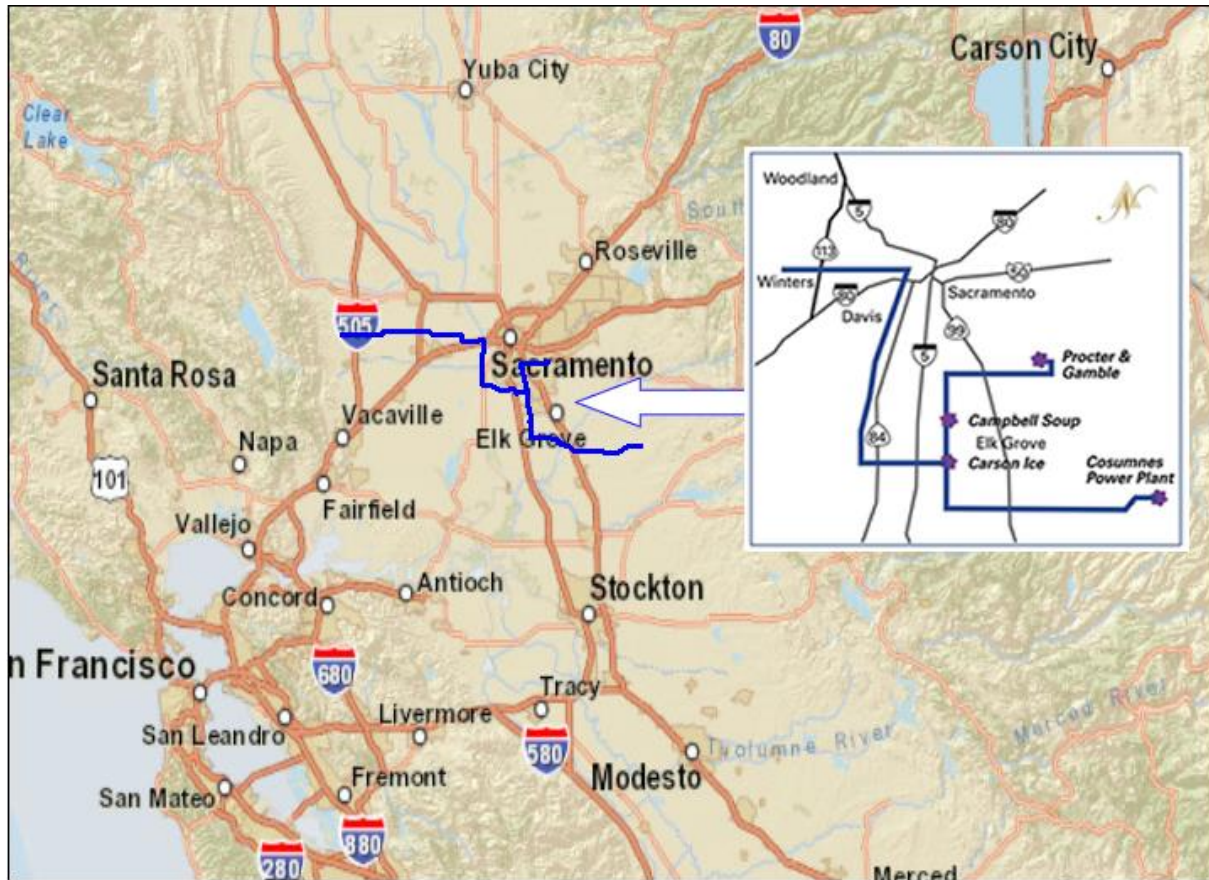
SMUD owns a transmission gas pipeline, has an equity interest in two PG&E backbone gas transmission lines, and contracts with existing interstate natural gas transmission lines to deliver natural gas to its power plants.

SMUD's diversified portfolio of gas transmission arrangements allow for the purchase of gas from a variety of suppliers and locations, and the opportunity to capitalize on regional price differentials where possible. SMUD's ownership interest in the SMUD/PG&E backbone and Local Pipeline enhances the reliability of SMUD's gas supply.

4.7.1 The Gas Pipeline

SMUD constructed and owns a 20 inch (in.), 50- mile natural gas pipeline in the greater Sacramento area (the "Local Pipeline") that transports gas to all the Local Gas-Fired Plants except SPA McClellan (See Figure 6). The Local Pipeline is interconnected with PG&E's major California gas transmission lines 400 and 401 at the Winters intertie. Additionally, it may be interconnected with one or more private gas gathering pipelines located in the area, and/or other FERC approved pipelines that may be built in the local area. In conjunction with the construction of the SFA Project, SMUD extended the Local Pipeline to the plant site. The 26-mile extension was completed in 2004. The extension is 24 in. in diameter and was designed to serve both the SFA Project and an additional second phase, if constructed.

Figure 6: SMUD Local Pipeline



4.7.2 PG&E Backbone Gas Transmission Lines 400 and 401

In 1996, SMUD purchased an equity interest in PG&E's backbone gas transmission lines 300 and 401 (referred to as the PG&E backbone). The total capacity acquired is currently approximately 86,700 Dth/day. It consists of approximately 47,572 Dth/day of firm gas transport from the California–Oregon border at Malin, Oregon and 39,193 Dth/day from the California–Arizona border at Topock, Arizona, to SMUD's interconnection with the PG&E backbone near Winters, California. This purchase made SMUD a co-owner of the PG&E backbone gas transmission lines 300 and 401. It obligated SMUD to pay PG&E to operate the pipelines on its behalf, subject to the terms of the purchase agreement and operating protocols.

4.7.3 Gas Storage

SMUD also employs gas storage as part of its overall fuel supply strategy. Gas storage is useful in helping to balance gas supply, mitigate market price volatility, and provide a reliable supply to meet peak day delivery requirements.

4.8 TANC California-Oregon Transmission Project

The California-Oregon Transmission Project (COTP) is one part of a three-part 500 kV-line coordinated system known as the California-Oregon Intertie or (COI). The COTP is allocated one-third of the 4,800 MW capability of the COI system. can help increase awareness of business risks across an entire organization, instill confidence in strategic objectives, improve compliance with regulatory and internal mandates, and enhance operational efficiency through more consistent applications of processes and controls. The Transmission Agency of Northern California (TANC) TANC is entitled to use 1,390 MW, SMUD is a member of TANC and is entitled to 378 MW of the COTP capacity. SMUD is entitled to approximately 528 MW of TANC’s transfer capability. SMUD relies on its COTP rights to purchase power and obtain renewable resources to supplement its own resources to serve its load.⁴

4.9 SMUD Capital Projects

SMUD’s annual budget provides funding for capital programs necessary to meet the Board’s Strategic Directives over the year and to ensure continuity into the future.

SMUD’s 2024 enterprise portfolio includes investments across our five strategic pillars – safety and reliability, environmental leadership, community vitality, affordability, and organizational agility. The proposed capital investment budget for 2024 is \$555 million for planned investment in generation, transmission, distribution, buildings, vehicles, technology, and other assets critical to meeting the energy needs of our customers and community. Proposed capital expenditures go through a rigorous evaluation and prioritization process, based on strategic alignment, risk, criticality, and financials to ensure SMUD prioritizes work that has the highest contribution to the Board’s Strategic Directions and our 2030 Zero Carbon vision.

5.0 SMUD Facilities

5.1 General Facilities

The SMUD Downtown Headquarters Campus is in Sacramento’s East Sacramento Neighborhood, bordered by 59th Street to the west, 65th Street to the east, Folsom Blvd. to the north and S Street to the south; Sacramento Regional Transit District’s Light Rail Line bisects the site. The Headquarters Campus serves as a base for daily business operations. The total site area is approximately 35 acres. The Headquarters Campus includes the original historic Headquarters building, parking areas, currently undeveloped Kramer property, 59th Street Corporate Yard, Energy Management Center, Customer Services Center, Field Reporting Facility (including Folsom Blvd. frontage property) and ancillary structures.

SMUD also operates out of additional general facilities located in and around Sacramento County: These additional facilities include the East Campus Operating Center, Sacramento Power Academy, Rancho Seco Switchyard, Hedge Training Facility and Fresh Pond Facility.

⁴ Electric Revenue Bonds, 2023 Series K Official Statement, Page A-38-39, June 6, 2023.

6.0 Physical Setting

SMUD's service territory is within Sacramento County, any impacts as a result of a hazard event to SMUD's Plan Area would have the greatest impact to the Sacramento Region. As such, the assessment provided in section 6.0 will be focused on Sacramento County.

6.1 Geography

Sacramento County lies just north of the center of California's Central Valley. The confluence of two of the state's major rivers, the Sacramento and the American, lies within the County. The southwestern portion of the County extends far into the Sacramento-San Joaquin Delta, to the point just north of Antioch, where nearly all waters of the Central Valley converge. To the south, San Joaquin County is primarily agricultural. The wooded foothills of the Sierra Nevada rise to the east in Amador and El Dorado Counties.⁵

In general, Sacramento County's topography can be characterized by a broad band of very flat valley floor land in the western sector, a transition zone of gently sloping alluvial plains in the central sector, and a low foothill region in the eastern sector. Elevations range from below sea level in the delta island area in the Southwest corner of the County to approximately 800 feet in the foothill region.⁶

6.2 Climate

Sacramento County is characterized by a mild climate, with year-round sunshine. The summers are warm, with dry days and mild nights. "Rainy season" historically occurs from November through February. Mountains surround the Sacramento Valley to the west, north and east.

Torrential rain and heavy snow frequently fall on the western Sierra Nevada slopes, the southern Cascades, and to a lesser extent, the Coast Range. As a result, flood conditions occasionally occur along the Sacramento River and its tributaries.⁷

⁵ Sacramento County Hazard Mitigation Plan, October 10, 2023.

⁶ Sacramento County Hazard Mitigation Plan, October 10, 2023.

⁷ Sacramento County Hazard Mitigation Plan, October 10, 2023.

7.0 Demographics

SMUD’s service territory is within Sacramento County, any impacts as a result of a hazard event to SMUD’s Plan Area would have the greatest impact to the Sacramento Region. As such, the assessment provided in section 7.0 will be focused on Sacramento County.

7.1 Population Estimates

7.1.1 Current and Historical Population

The California Department of Finance 2020 estimates for population of the County by cities are shown in table 13.

City	Population
Citrus Heights	86,367
Elk Grove	176,972
Folsom	84,592
Galt	25,239
Isleton	780
Rancho Cordova	80,359
Sacramento	518,037
Unincorporated	604,272

7.1.2 Projected Future Population

The California Department of Finance, Demographic Research Unit is responsible by statute for maintaining postcensal population projections which are calculated using the demographic balancing equation. This method calculates the population in the target year by starting with the population from the previous year, adding nature increase (births minus deaths) and net migration that occurred during the time period between the two years.

Year	Projected Population	Year	Projected Population
2024	1,569,050	2025	1,571,917
2026	1,576,388	2027	1,581,542
2027	1,581,542	2028	1,589,844
2029	1,600,576	2030	1,611,309
2031	1,621,862	2032	1,632,286
2033	1,643,976	2034	1,653,203
2035	1,663,039	2036	1,672,603
2037	1,682,027	2038	1,691,180
2039	1,699,955	2040	1,708,461

⁸ Department of Finance Price Factor and Population Information, <https://dof.ca.gov/wp-content/uploads/sites/352/Forecasting/Demographics/Documents/PriceandPopulation2022.pdf>, May 2022.

⁹ Department of Finance Price Factor and Population Information, https://dof.ca.gov/wp-content/uploads/sites/352/2023/07/P2A_County_Total.xlsx, 2019.

7.2 Indicators for Social Vulnerability

SMUD understands that some populations are at a greater risk from the impacts of hazard events because of physical abilities or limited resources. The vulnerable populations may vary from the general population in risk perception, living conditions, access to information and services, and capabilities to address hazard impacts.

7.2.1 Customer Opt-In Program

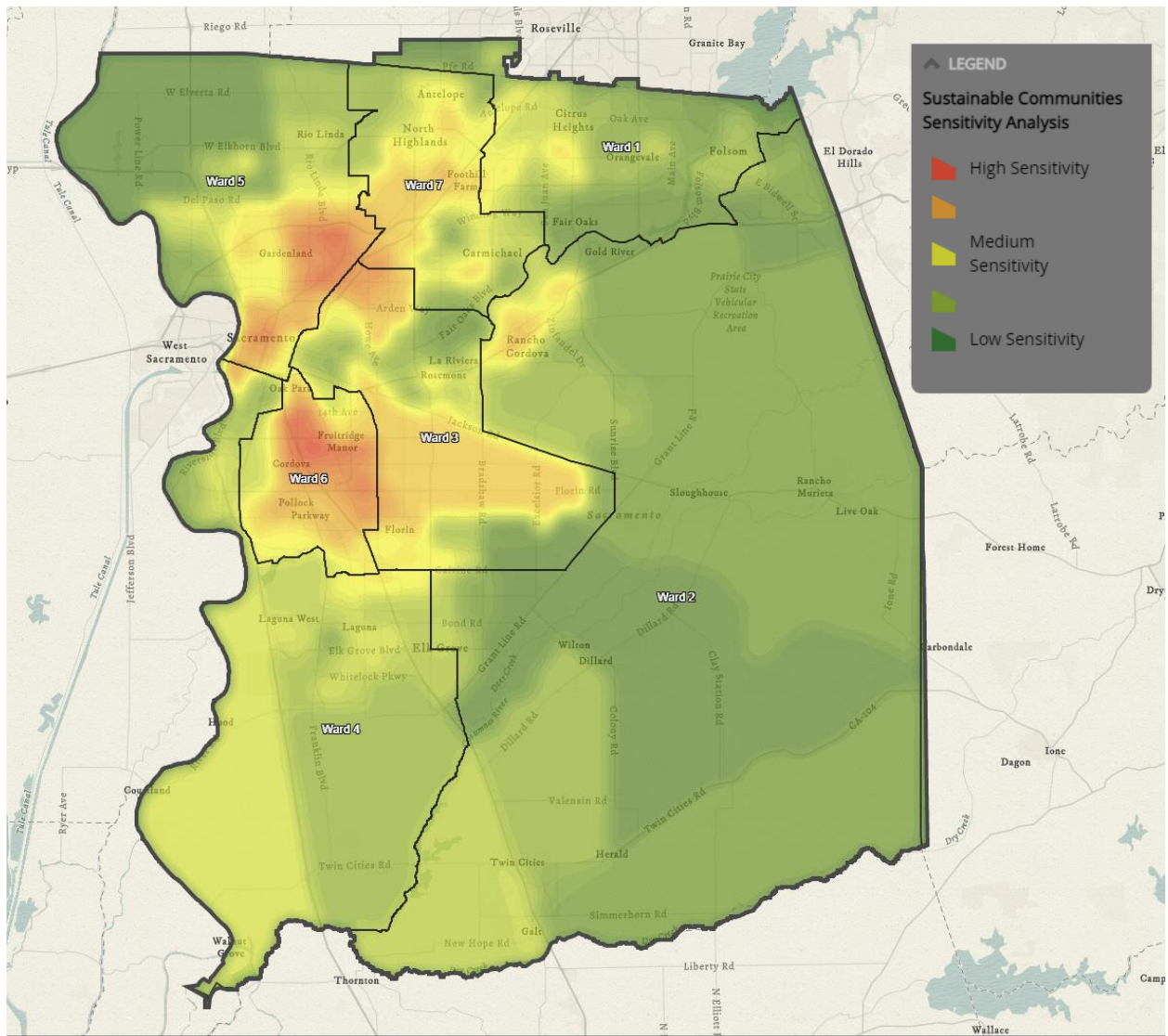
SMUD has implemented an opt-in program on smud.org that allows for vulnerable populations to enroll and receive additional information or notifications in the event of a hazard occurrence in SMUD service territory. Among SMUD's vulnerable customers are those enrolled in the Medical Equipment Discount Rate program (MED rate), Energy Assistance Program rate, 3rd Party & Senior ID and those that have self-identified and are enrolled in the vulnerable customer program. These include customers who may rely on specialized medical equipment.

7.2.2 Sustainable Communities

In addition to its Opt-In Program, SMUD has a Sustainable Communities Team which oversees a community-focused program to enhance the quality of life for all SMUD customers through innovative energy solutions. The program helps bring environmental equity and economic vitality to all communities in SMUD's service area, with special attention given to historically underserved neighborhoods.

In order to deploy comprehensive resources to the communities most in need, SMUD has developed an interactive map to help analyze current data to indicate the local areas most likely to be underserved or in distress by lack of community development, income, housing, employment opportunities, transportation, medical treatment, nutrition, education and clean environment. This map will be leveraged to support the identification of vulnerable communities during hazard events. SMUD's interactive sustainability map can be found here: [Sustainable Communities Resource Priorities Map \(smud.org\)](http://smud.org). Figure 7 shows a stationary view of SMUD's Sustainable Communities Resource Priorities Map.

Figure 7: Sustainable Communities Resource Priorities Map¹⁰



A number of factors were considered when developing the interactive map. The factors considered in developing the map include:

- Opportunity Zones**
 Opportunity zones are a new tool for community development. Established in the Tax Cuts and Jobs Act of 2017, Opportunity Zones provide tax incentives for investment in designated census tracts. California Opportunity Zones will support new investments in environmental justice, sustainability, climate change and affordable housing.

¹⁰ <https://usage.smud.org/SustainableCommunities/>, October 10, 2023.

- **Sacramento Promise Zone**

Sacramento's designation in 2015 as a "promise zone" by the United States Department of Housing and Urban Development is the catalyst for service expansion in Sacramento's most economically distressed neighborhoods. Through the Promise Zone Initiative, the federal government works with local leaders and organizations to improve the quality of life for residents in underserved neighborhoods.

As one of 16 urban promise zones in the nation, Sacramento's promise zone encompasses 22 square miles from Del Paso Heights in the north to The Avenues in the south. Among the 127,000 residents within the promise zone, 34% are living in poverty, 19% are unemployed and 63% of third graders are reading below grade level.

- **SB 535 Disadvantaged Communities**

Areas designated as Disadvantaged Communities by state Senate Bill 535 are specifically targeted for investment of proceeds from the State's cap-and-trade program. These investments are aimed at improving public health, quality of life and economic opportunity in California's most burdened communities, while at the same time reducing pollution that causes climate change.

- **Sacramento Poverty, by Zip Code**

The US Census Bureau determines the Federal Poverty Level each year. The poverty level is based on the size of the household and the ages of family members. If a person or family's total income before taxes is less than the poverty level, the person or family are considered in poverty. The areas shown within this data set represent those zip codes within Sacramento County where 25% of the population are considered to be below the poverty line.

- **Medically Underserved Areas**

Medically underserved areas or populations are areas designated by the Health Resources and Services Administration (HRSA) as having too few primary care providers, high infant mortality, high poverty or a high elderly population. Health Professional Shortage Areas (HPSAs) are designated by HRSA as having shortages of primary medical care, dental or mental health providers and may be geographic (a county or service area), a population (e.g., low income or Medicaid eligible) or facilities (e.g., federally qualified health center or other state or federal prisons).

- **Healthy Sacramento Coalition – Health Equity**

The Healthy Coalition's goal is to reduce tobacco use, obesity, death, and disability due to chronic disease, as well as reduce health disparities, build a safe and healthy physical environment, and improve the social and emotional well-being of Sacramento County residents. The coalition conducted an assessment identifying 15 zip codes that had consistently high rates of poor health outcomes.

- Social Vulnerability to Climate Change Impacts in California**
 The social vulnerability index shows social vulnerability to climate change related impacts, such as natural disasters or increased heat stress. Vulnerability is defined as the susceptibility of a population to harm from exposure to a hazard and its ability to prepare for, respond to, and recover from hazards.
- Environmental Justices: CalEnviroScreen 3.0**
 CalEnviroScreen identifies California communities by census tract that are disproportionately burdened by, and vulnerable to, multiple sources of pollution.

7.3 Economy

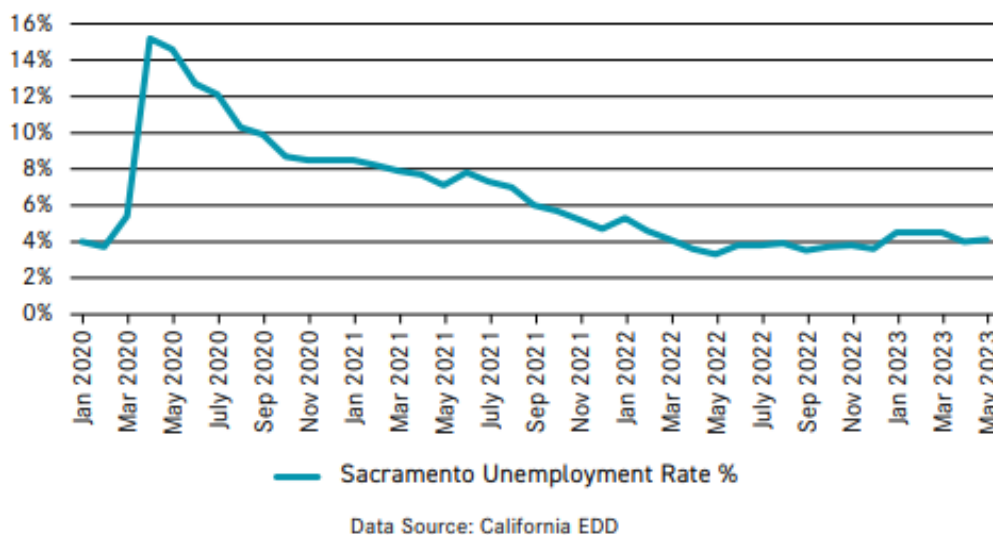
7.3.1 Industry, Businesses, and Institutions

SMUD provides electrical power to the Sacramento Region powering the state capital, technology industries, critical infrastructure, support services, businesses, agriculture, and other critical services essential to this region. An impact to SMUD’s critical infrastructure could potentially have catastrophic impacts to the operations and viability of the entire region. These potential events are discussed in the hazards sections below.

7.3.2 Employment Trends and Occupations

As of May 2023, the unemployment rate in the Sacramento region remained below 5 percent.¹¹ This is lower compared to California, but higher as compared to US unemployment rates seen in figure 8. The health care service and the education sector experienced significant job gains with nearly 13,000 jobs in the last 12 months and the construction sector performed the worst seeing a decline of more than 3,000 jobs during the same timeframe.¹²

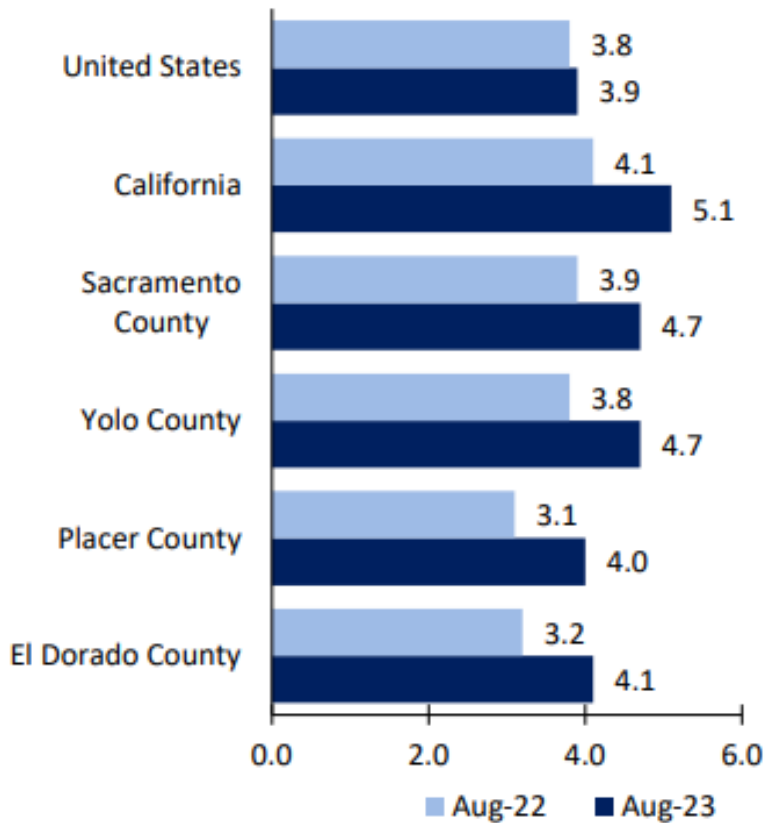
Figure 8: Sacramento Local Unemployment Rate Since the Pandemic



¹¹ Sacramento Business Review, Volume 15 Issue 2, pg. 10, [SBR MidYear23 Web.pdf \(squarespace.com\)](#), October 25, 2023.

¹² Sacramento Business Review, Volume 15 Issue 2, [SBR MidYear23 Web.pdf \(squarespace.com\)](#), October 25, 2023.

Figure 9: Unemployment Rates for the Nation and Selected Areas¹³



8.0 Hazards

A number of different data points were used in identifying the hazards that are most likely to impact SMUD's Plan Area. These data points included past disasters within California, types of disasters, what identified disasters are in California's Hazard Mitigation Plan, as well as past disaster declarations impacting the Plan Area. Additional details on these data points will be discussed below.

8.1 Disaster Declaration

A study conducted by Moneygeek cited California as one of the most disaster-prone states with 282 disasters from 2003 to July 2023.¹⁴ The breakdown of the disaster count for California can be viewed in table 15. The breakdown of the declared disaster category for SMUD's Plan Area is outlined in figure 10.

¹³ U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics, [Overviews: Geographic Information: U.S. Bureau of Labor Statistics \(bls.gov\)](https://www.bls.gov/overviews/geographic-information/), October 25, 2023.

¹⁴ Moneygeek, *Most Disaster-Prone States, Which State Is the Biggest Disaster?* ([moneygeek.com](https://www.moneygeek.com)), October 25, 2023.

Table 15: Disaster Declaration by Incident for California and U.S ¹⁵						
Location	Total Disaster Count	Wildfire Count	Severe Storm Count	Hurricane Count	Floods	Other
California	282	246	16	1	7	12
United States	2,602	1041	702	260	208	391

Figure 10: Disaster Declaration by Incident for SMUD Plan Area¹⁶

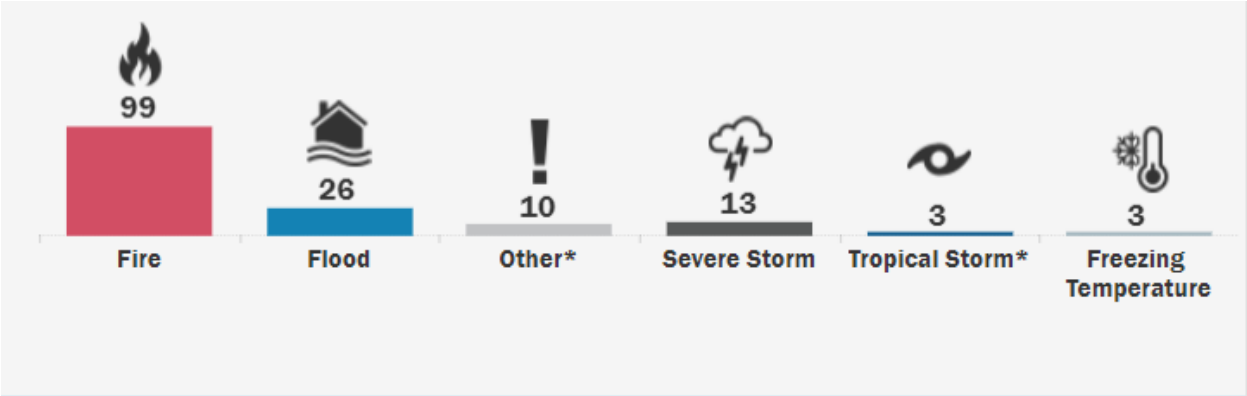


Table 16 shows the disaster declarations by county for SMUD’s Plan Area.

Table 16: Federal Disaster Declarations by County ¹⁷		
County	Disaster Category	Count (#)
Alameda	Flood	4
	Biological	2
	Severe storm	1
Colusa	Flood	3
	Biological	2
	Severe storm	2
Contra Costa	Flood	4
	Biological	2
	Severe storm	1

¹⁵ Federal Emergency Management Agency fema.gov, October 9, 2023

¹⁶ Federal Emergency Management Agency fema.gov, October 9, 2023

¹⁷ Federal Emergency Management Agency fema.gov, October 9, 2023

Table 16: Federal Disaster Declarations by County¹⁷

County	Disaster Category	Count (#)
El Dorado	Flood	5
	Biological	2
	Severe storm	3
	Fire	5
Fresno	Flood	3
	Biological	2
	Severe storm	1
	Fire	3
Glenn	Flood	4
	Biological	2
	Severe storm	2
Kern	Flood	2
	Biological	2
	Severe storm	1
	Fire	4
	Earthquake	1
Kings	Flood	3
	Biological	2
	Severe storm	1
Merced	Flood	3
	Biological	2
	Severe storm	2
Modoc	Flood	2
	Biological	2
	Severe storm	2
	Fire	1
Placer	Flood	3
	Biological	2
	Severe storm	1
	Fire	5
Sacramento	Flood	5
	Biological	2
	Severe storm	2
San Benito	Flood	4
	Biological	2
	Severe storm	2
San Bernardino	Flood	2
	Biological	2
	Severe storm	1
	Fire	8
	Earthquake	1

Table 16: Federal Disaster Declarations by County¹⁷

County	Disaster Category	Count (#)
San Joaquin	Flood	3
	Biological	2
	Severe storm	1
Santa Clara	Flood	4
	Biological	2
	Severe storm	2
	Fire	2
Shasta	Flood	1
	Biological	2
	Severe storm	3
	Fire	10
Siskiyou	Flood	2
	Biological	2
	Severe storm	1
	Fire	7
Solano	Flood	3
	Biological	2
	Severe storm	2
	Fire	5
	Earthquake	1
Stanislaus	Flood	4
	Biological	2
	Severe storm	1
	Fire	2
Sutter	Flood	3
	Biological	2
	Severe storm	1
	Dam/levee break	1
Tehama	Flood	3
	Biological	2
	Severe storm	1
	Fire	1
Yolo	Flood	4
	Biological	2
	Severe storm	2
	Fire	3

Table 17: SMUD Hazards Comparison with California State Hazards in HMP

2023 California State HMP	2024-28 SMUD HMP	Comment
Air pollution	Air pollution	This is a concern for SMUD and is addressed in other planning mechanisms, will include in 2024-29 update.
Civil disorder	Other hazards of interest	Civil disorder is included in a combined discussion of human-caused hazards.
Cyber threats	Cyber threats	Cyber security threats are included.
Dam failure	Dam and levee failure	These hazards are combined in one chapter.
Drought	Drought	This local hazard aligns with the State.
Earthquake	Earthquake	This local hazard aligns with the State.
Electromagnetic pulse attack	Not included	This is not a concern for the SMUD.
Energy shortage	Energy shortage	This is a concern for SMUD and is addressed in other planning mechanisms.
Epidemic/pandemic/vector-borne disease	Pandemic	Infectious disease is included.
Extreme cold or freeze	Severe weather	
Extreme heat	Extreme heat	This hazard was included in a combined discussion of severe weather hazards.
Geomagnetic storm (space weather)	Not included	This is not a concern for the SMUD.
Hazardous materials release	Hazardous materials release	Hazardous materials incidents are included.
Invasive and nuisance species	Not included	Included in SMUD’s environmental plans.
Landslide, debris flow, and other mass movements	Geological hazards	
Levee failure	Levee failure	Included in SMUD’s HMP.
Natural gas pipeline hazards	Natural gas pipeline hazards	Pipeline interruptions are included.
Oil spills	Oil spills	Oil spills are included.
Other potential causes of long-term electrical outage	Energy Shortage	Included in discussion in energy shortage.
Public safety power shutoff	Severe weather/wildfire	PSPS events are discussed in connection with severe weather hazard as well as wildfire.
Radiological accidents	Other hazards of interest	Radiological materials are mentioned in connection with hazardous materials incidents.
Riverine, stream and alluvial flood	Riverine, stream and alluvial flood	The flood chapter addresses these hazards.
Sea-level rise, coastal flooding, and erosion	Sea-level rise, coastal flooding, and erosion	The flood chapter addresses these hazards.

Severe wind, weather, and storms	Severe weather and storms	The severe weather chapter addresses these.
Snow avalanche	Not included	
Subsidence	Geological hazards	
Supply chain	N/A	Did not include
Terrorism	Terrorism	Terrorism is included.
Transportation accidents resulting in explosions or toxic releases	Other hazards of interest	This is a concern for SMUD and is addressed in other planning mechanisms.
Tree mortality	Tree mortality	Included.
Tsunami and seiche	Tsunami	Included.
Urban structural fire	Fire	This local hazard aligns with the State.
Volcano	Volcanoes	This is not a concern for SMUD.
Well stimulation and hydraulic fracturing	Not included	This is not occurring in SMUD's Plan Area.
Wildfire	Wildfire	This local hazard aligns with the State.

Table 18 outlines the federal disaster declarations pertaining to SMUD’s Plan Area since 2017.

Table 18: Federal Disaster Declarations for California Pertaining to SMUD Plan Area¹⁸		
Type of Event	FEMA Disaster #	Declaration Date
Severe winter storms, straight-line winds, flooding, landslides, and mudslides	DR-4699-CA	April 3, 2023
Severe winter storms, flooding, landslides, and mudslides	DR-4683-CA	January 14, 2023
Caldor Fire	DR-4619-CA	September 12, 2021
California wildfires	DR-4610-CA	August 24, 2021
California wildfires	DR-4659-CA	October 16, 2020
California wildfires	DR-4558-CA	August 22, 2020
Covid-19 pandemic	DR-4482-CA	March 22, 2020
Severe winter storms, flooding, landslides, and mudslides	DR-4434-CA	May 18, 2019
Severe winter storms, flooding, landslides, and mudslides	DR-4431-CA	May 1, 2019
California wildfires	DR-4407-CA	November 12, 2018
California wildfires and high winds	DR-4382-CA	August 4, 2018
California wildfires, flooding, mudflows, and debris flows	DR-4353-CA	January 2, 2018
California wildfires	DR-4344-CA	October 10, 2017
California severe winter storms, flooding, and mudslides	DR-4308-CA	April 1, 2017

¹⁸FEMA, Disaster Declarations, October 19, 2023, <https://www.fema.gov/locations/california>.

Table 18: Federal Disaster Declarations for California Pertaining to SMUD Plan Area¹⁸

Type of Event	FEMA Disaster #	Declaration Date
California severe winter storms, flooding, and mudslides	DR-4305-CA	March 16, 2017

9.0 Regulations and Programs

The Plan must describe the review and incorporation of existing plans, studies, reports, and technical information (44 CFR § 201.6(b)(3)). In addition, it must document existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs (44 CFR § 201.6(c)(3)).

SMUD’s Government Affairs team engages in all parts of the legislative, regulatory and policy development processes on behalf of SMUD. SMUD’s Government Affairs team works closely with SMUD subject matter experts, local agency offices of emergency management and regional police and fire first responders to identify and mitigate a variety of hazards, including wildfire mitigation and more.

9.1 Federal and State

Table 19: Summary of Relevant Federal Agencies, Programs and Regulations

Agency, Program or Regulation	Hazard Mitigation Area Affected	Relevance
Americans with Disabilities Act	Action Plan implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
Bureau of Land Management (BLM)	Planning	Federal agency responsible for administering federal lands.
Civil Rights Act of 1964	Action Plan implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
Clean Water Act	Action Plan implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
Community Development Block Grant Disaster Resilience Program	Action Plan funding	This is a potential alternative source of funding for actions identified in this plan.
Community Rating System	Flood hazard	This voluntary program encourages floodplain management activities that exceed the minimum National Flood Insurance Program requirements.

Table 19: Summary of Relevant Federal Agencies, Programs and Regulations

Agency, Program or Regulation	Hazard Mitigation Area Affected	Relevance
Disaster Mitigation Act	Hazard mitigation planning	This is the current federal legislation addressing hazard mitigation planning.
Emergency Relief for Federally Owned Roads Program	Action Plan funding	This is a possible funding source for actions identified in this plan.
Emergency Watershed Program	Action Plan funding	This is a possible funding source for actions identified in this plan.
Endangered Species Act	Action Plan implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
Federal Energy Regulatory Commission Dam Safety Program	Dam failure hazard	This program cooperates with a large number of federal and state agencies to ensure and promote dam safety.
National Dam Safety Act	Dam failure hazard	This act requires a periodic engineering analysis of most dams in the country.
National Environmental Policy Act	Action Plan implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
National Flood Insurance Program	Flood hazard	This program makes federally backed flood insurance available to homeowners, renters, and business owners in exchange for communities enacting floodplain regulations.
National Incident Management System	Action Plan development	Adoption of this system for government, nongovernmental organizations, and the private sector to work together to manage incidents involving hazards is a prerequisite for federal preparedness grants and awards.
Pipeline and Hazardous Materials Safety Administration (PHMSA)	Gas pipeline safety	PHMSA is responsible for regulating and ensuring the safe and secure movement of hazardous materials to industry and consumers by all modes of transportation, including pipelines.

Table 19: Summary of Relevant Federal Agencies, Programs and Regulations

Agency, Program or Regulation	Hazard Mitigation Area Affected	Relevance
Presidential Executive Order 11988 (Floodplain Management)	Flood hazard	This order requires federal agencies to avoid long and short-term adverse impacts associated with modification of floodplains.
Presidential Executive Order 11990 (Protection of Wetlands)	Action Plan implementation	FEMA hazard mitigation project grant applications require full compliance with applicable presidential executive orders.
U.S. Army Corps of Engineers Dam Safety Program	Dam failure hazard	This program is responsible for safety inspections of dams that meet size and storage limitations specified in the National Dam Safety Act.
U.S. Army Corps of Engineers Flood Hazard Management	Flood hazard, Action Plan implementation, Action Plan funding	The Corps of Engineers offers multiple funding and technical assistance programs available for flood hazard mitigation actions.
U.S. Forest Service (USFS)	Wildfire hazard	Federal agency that manages public lands in the form of national forests and grasslands.

9.2 Fiscal Capabilities

As a community-owned, not-for-profit utility, SMUD’s funding comes from its rate payers. SMUD looks holistically at its budget, programs, projects, and initiatives each year to ensure it continues to deliver value to its customers and communities in a way that maximizes benefits to all communities and the customers it serves. This process takes into consideration amongst other things, risk, and hazard impacts to the organization. SMUD’s annual budget funds the prioritized projects identified for the following year.

In addition to rate payer funding, SMUD applies for varied available grants to address certain risks and hazards not budgeted during the annual process.

9.3 NFIP Compliance

SMUD is a special district without flood management responsibilities or authorities. SMUD participates in the National Flood Insurance Program (NFIP) for coverage on 4 of its powerhouses located in the UARP. The Slab Creek Powerhouse has experienced 2 separate cases of flooding.

9.4 Public Outreach Capability

SMUD has a number of teams dedicated to regular community engagement and outreach to our customers, the community, our neighbors as well as to government entities where we own or operate energy infrastructure. These teams include our Community Relations, Outreach, and Events team, Corporate Communications, Sustainable Communities, and

Government Affairs to name a few. An assessment of education and outreach capabilities is presented in table 20.

Table 20: Outreach Capability	
Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? If yes, please briefly describe.	Yes HMP and WMP both have their own links on SMUD’s website, in addition, SMUD has the capability to put notifications on their website header when emergencies occur or warning of potential weather danger.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? If yes, please briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, please briefly describe.	Yes SMUD has a storm preparation and fire preparedness campaign annually. This includes communications via mailers, TV and radio, billboards, social media, SMUD’s website, etc. The public can also subscribe to get notifications on certain topics of interest on our Board website.
Do you have any established warning systems for hazard events? If yes, please briefly describe.	Yes SMUD uses mass notification systems internally (Everbridge) for employees and externally (Message Broadcast) for customers. SMUD may also coordinate with County Emergency Services on potential Wireless Emergency Alerts and other notifications.

Part 2

Risk Assessment

10.0 Risk Assessment Methodology

Hazard risk assessment is the process of measuring the potential impact to life or property, as well as economic impacts, resulting from the hazard. Its intent is to identify from available data, the vulnerabilities of a community. The results provide a foundation on which to develop and prioritize mitigation actions to reduce damage from hazards by improving preparedness and response times and allocating resources to areas with the greatest vulnerability.

10.1 Risk Assessment Tools

10.1.1 Results and Methodology

SMUD maintains an ERM program which provides a framework and repeatable and consistent methodologies to identify, assess, manage, plan, and respond to risks and hazards to which SMUD is most vulnerable. The ERM program methodology takes into consideration impacts to six different areas (financial, legal, regulatory and compliance, workforce, reputation, operations, and strategy), as well as the likelihood and velocity of the risk occurrence. Implementing this framework and methodology, SMUD has identified the hazards listed in Table 24 that will be addressed in this HMP.

10.1.2 Mapping

Maps were produced using geographic information system (GIS) software to show the spatial extent and location of hazards when such datasets were available. SMUD has its own internal GIS function that leverages national, state, county, and city databases as well as its own to locate available spatially based data relevant to this planning effort. The maps are included in the hazard profile chapters.

10.1.3 Modeling

SMUD leveraged FEMA's GIS-based software program Hazards U.S. (Hazus) as well as past events in SMUD's Plan Area to estimate the risk impacts in the Plan Area. Hazus is used to support risk assessments, mitigation planning, and emergency planning, and response. It provides a wide range of data to estimate potential losses from natural disasters.

10.2 Risk Assessment Approach

10.2.1 Enterprise Risk Management Framework

SMUD uses its existing ERM framework to identify and assess the various hazards and a summary of these assessments is included in table 21 below. SMUD's ERM framework takes into consideration both quantitative and qualitative factors to determine the level of inherent and residual risk of a particular hazard. An inherent risk level refers to the risk before any mitigations or controls are in place while the residual risk level refers to the risk after all mitigations and effective controls are considered.

All identified risks in the ERM portfolio are owned by an Executive and managed at the Director level. During a risk evaluation, the Director, manager, stakeholders, and subject matter experts are consulted. ERM staff gathers pertinent information to conduct the

evaluation which includes a root cause analysis. Information gathered includes key risk drivers, key risk impacts, mitigations, processes, procedures, controls, and internal/external risk trend.

SMUD's ERM process is integrated with internal audit processes. This integrated approach works to evaluate the effectiveness of mitigation strategies and controls implemented by management to reduce risks. ERM reviews the audit results to determine if the controls are effective strategies or are found to be ineffective. ERM staff will reassess any residual enterprise risk and work with the business areas to identify what else, if anything, needs to be done to further manage the risk to be within management's objectives.

SMUD has reviewed the hazards and determined the likelihood of occurrence, extent, severity, and significance that the hazards would have on SMUD infrastructure and business operations if they occurred.

Table 21: Hazards Assessment

Identified Hazards	Geographic Extent	Probability of Future Occurrences	Magnitude/ Severity	Significance	Climate Change Influence
Air pollution	Extensive	Highly likely	Negligible	Low	Medium
Avalanches	Limited	Possible	Limited	Low	None
Bird strike	Limited	Highly likely	Negligible	Low	Low
Cyber threats	Significant	Highly likely	Catastrophic	High	None
Dam failure and safety	Limited	Unlikely	Limited	High	Low
Droughts and water shortages	Extensive	Likely	Limited	Medium	High
Earthquake hazards	Significant	Likely	Critical	High	None
Energy shortage	Significant	Highly likely	Critical	Medium	Medium
Extreme heat	Extensive	Highly likely	Limited	Medium	High
Fog	Extensive	Highly likely	Limited	Medium	Medium
Freeze	Extensive	Possible	Critical	Low	High
Hazardous materials release	Limited	Likely	Limited	Low	Low
High winds (Winds and Tornadoes)	Significant	Highly likely	Critical	High	High
Landslides and other earth movements	Limited	Likely	Critical	Medium	None
Levee failure and safety	Significant	Possible	Limited	Medium	Low
Natural gas pipeline hazards	Limited	Possible	Catastrophic	High	Low
Nuclear hazards	Limited	Unlikely	Critical	High	None
Oil spills	Limited	Likely	Limited	Low	Low
Pandemic	Limited	Possible	Limited	Medium	Low
Physical security	Extensive	Highly likely	Catastrophic	High	None
Riverine, stream and alluvial flood hazards	Significant	Highly likely	Limited	Medium	High
Sea level rise, coastal flooding, and erosion hazards	Limited	Possible	Negligible	Low	High
Severe weather and storms	Extensive	Highly likely	Critical	High	High
Subsidence	Limited	Possible	Limited	Medium	Low
Supply Chain	Extensive	Likely	Limited	Medium	Medium
Terrorism	Extensive	Likely	Catastrophic	High	Medium

Table 21: Hazards Assessment

Identified Hazards	Geographic Extent	Probability of Future Occurrences	Magnitude/Severity	Significance	Climate Change Influence
Thunderstorm	Significant	Highly likely	Critical	High	High
Tree mortality	Limited	Highly likely	Negligible	Medium	Medium
Tsunami and seiche hazards	Limited	Remote	Negligible	Low	High
Wildland-urban interfaced structural fire hazards	Limited	Highly likely	Critical	Medium	Medium
Volcanoes	Limited	Remote	Negligible	Low	None
Wildland fire hazards	Limited	Highly likely	Critical	High	High

Scoring Rubric:

Geographic Extent

Limited: Less than 10% of plan area
 Significant: 10-50% of plan area
 Extensive: 50-100% of plan area

Probability of Future Occurrences

Remote: 0-5% probability of occurrence.
 Unlikely: no documented history of occurrence or events. 6-20% probability of occurrence. Annual probability is less than 1 in 1,000 years.
 Possible: 21-50% probability of occurrence. Annual probability of between 1 in 100 years and 1 in 1,000 years.
 Likely: 51-80% probability of occurrence. Annual probability of between 1 in 10 years and 1 in 100 years.
 Highly likely: Frequent events with a well-document history of occurrence. Annual probability of greater than 1 every year. 81-100% probability of occurrence.

Magnitude/Severity

Catastrophic: More than 50% of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths.
 Critical: 25-50% of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability.
 Limited: 10-25% of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable does not result in permanent disability.
 Negligible: Less than 10% of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid.

Significance or Climate Change Influence

Low: minimal potential impact/influence
 Medium: moderate potential impact/influence
 High: widespread potential impact/influence

11.0 Fire Hazards

11.1 Wildfire

11.1.1 General Background

A wildfire is an uncontrolled fire in a natural setting that is associated with combustible vegetation, and/or fuel. FEMA defines a wildfire as an unplanned fire burning in natural or wildland areas such as forests, shrub lands, grasslands, or prairies. Wildfires are most prevalent in conditions with high temperatures, low moisture content in the air, increased fuel accumulation, and high winds.

Climate change has the potential to exacerbate conditions ripe for wildfires. Jason Funk, senior climate scientist with the Union of Concerned Scientists (UCS) says “there is very well documented scientific evidence that climate change is increasing the length of the fire season, the size of the area burned each year and the number of wildfires¹⁹.” The severity of wildland fires is generally a function of a terrain’s combustible vegetation material and weather conditions. Tree stress and mortality, including damage due to insect infestations such as the bark beetle, exacerbate fire hazards.

11.1.2 Hazard Profile

Wildfires in the State of California have become increasingly common and destructive. Frequent drought conditions and unseasonably warm temperatures have increased, and could further increase, the possibility of wildfires occurring in areas where SMUD maintains generation, transmission, and distribution facilities. The number of diseased and dead trees has increased and could further increase this possibility. As a result, SMUD faces an increased risk that it may be required to pay for wildfire related property damage or personal injuries, fines, and penalties, some of which may not be covered by insurance, or may be disputed by insurers and could be material. In addition, a significant fire, or fires in SMUD’s generation, transmission or service area could result in damage or destruction to SMUD’s facilities, result in a temporary or permanent loss of energy load or otherwise materially increase SMUD’s costs or materially adversely affect SMUD’s ability to operate its Electrical System or generate revenues.

In SMUD’s Plan Area, fire season generally extends from early spring through late fall, due to the dry and hot nature of these months. If a fire occurs along an urban or rural interface, there is a high potential the fire could destroy structures, damage critical infrastructure, injure people and could result in the loss of lives.

There are a multitude of factors contributing to the increased quantity and size of wildfires plaguing the state. These factors include increased fuel loading, an increase in human-caused ignition capabilities, increased winds, climate change which is influencing drought, longer, hotter stretches of weather and increased tree mortality. Steep slopes also contribute to fire hazards by intensifying the effects of wind, making fire suppression difficult.

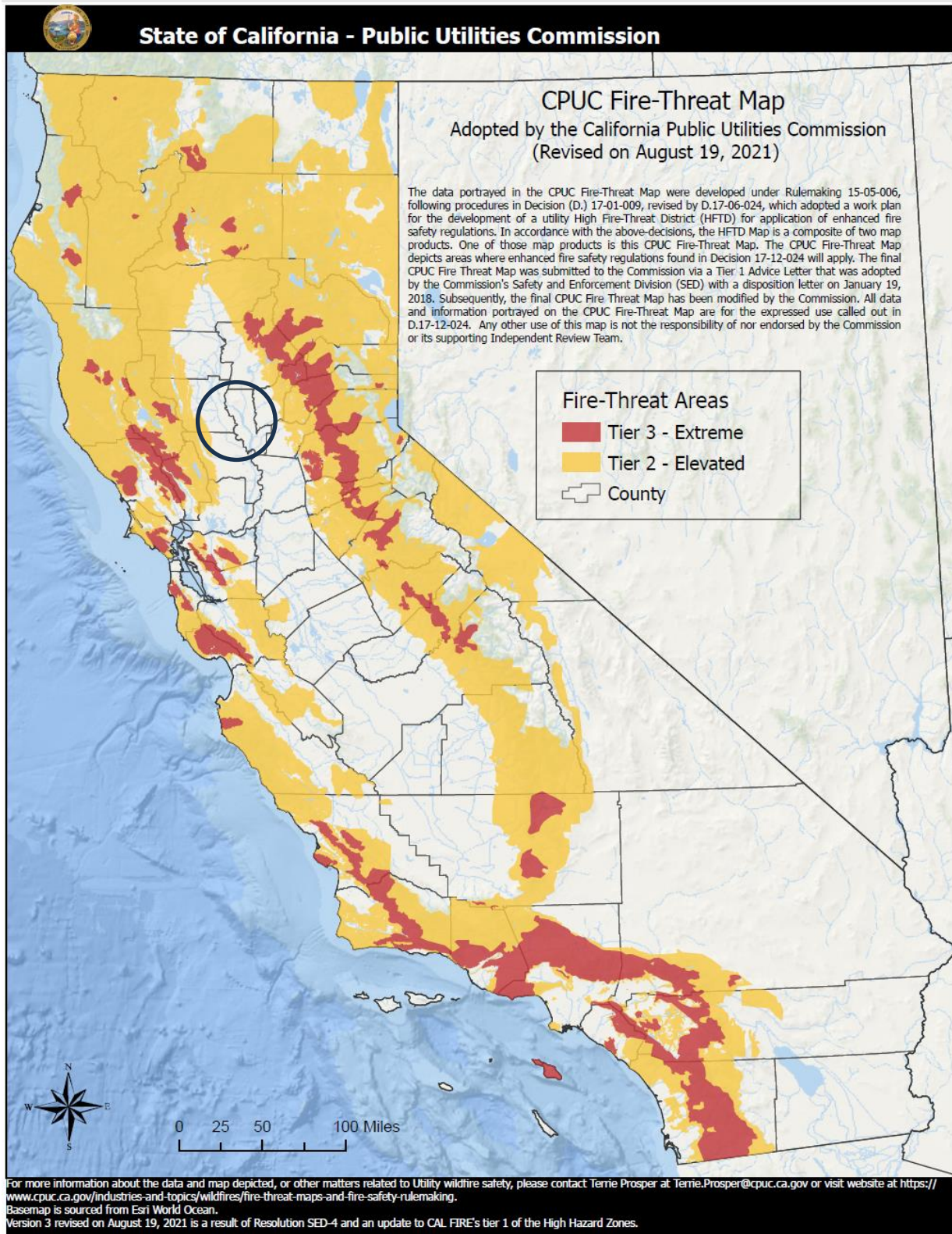
¹⁹ Brandlin, Anne-Sophie, How Climate Change is Increasing Forest Fires Around the World. <https://www.dw.com/en/how-climate-change-is-increasing-forest-fires-around-the-world/a-19465490>

Location

SMUD directly participated in the development of the CPUC's Fire-Threat Map, which defines the statewide High Fire Threat District (HFTD). As a territory lead in the HFTD map development process, SMUD collaborated with utility staff, local fire, and government officials to identify areas within its service territory that may be at an elevated or extreme risk of powerline ignited wildfires. Through peer reviews and assessments by an independent team of nationwide experts led by CAL FIRE, it was determined that SMUD's service area is appropriately situated outside the HFTD. However, some of SMUD's UARP facilities are located within both Tier 2 and Tier 3 of the HFTD, outside its service area. Despite not being regulated by the CPUC, SMUD has integrated the HFTD map into its construction, inspection, maintenance, repair, and clearance practices where applicable. SMUD believes that the HFTD map accurately identifies the level of wildfire risk within its service territory and UARP.

The CPUC Fire-Threat map identifies Tier 3, extreme fire risk, Tier 2, elevated fire risk and areas outside of the HFTD. Figure 11 depicts the CPUC Fire-Threat Map and SMUD's service area location within the map.

Figure 11: SMUD’s Service Area within CPUC Fire-Threat Map²⁰

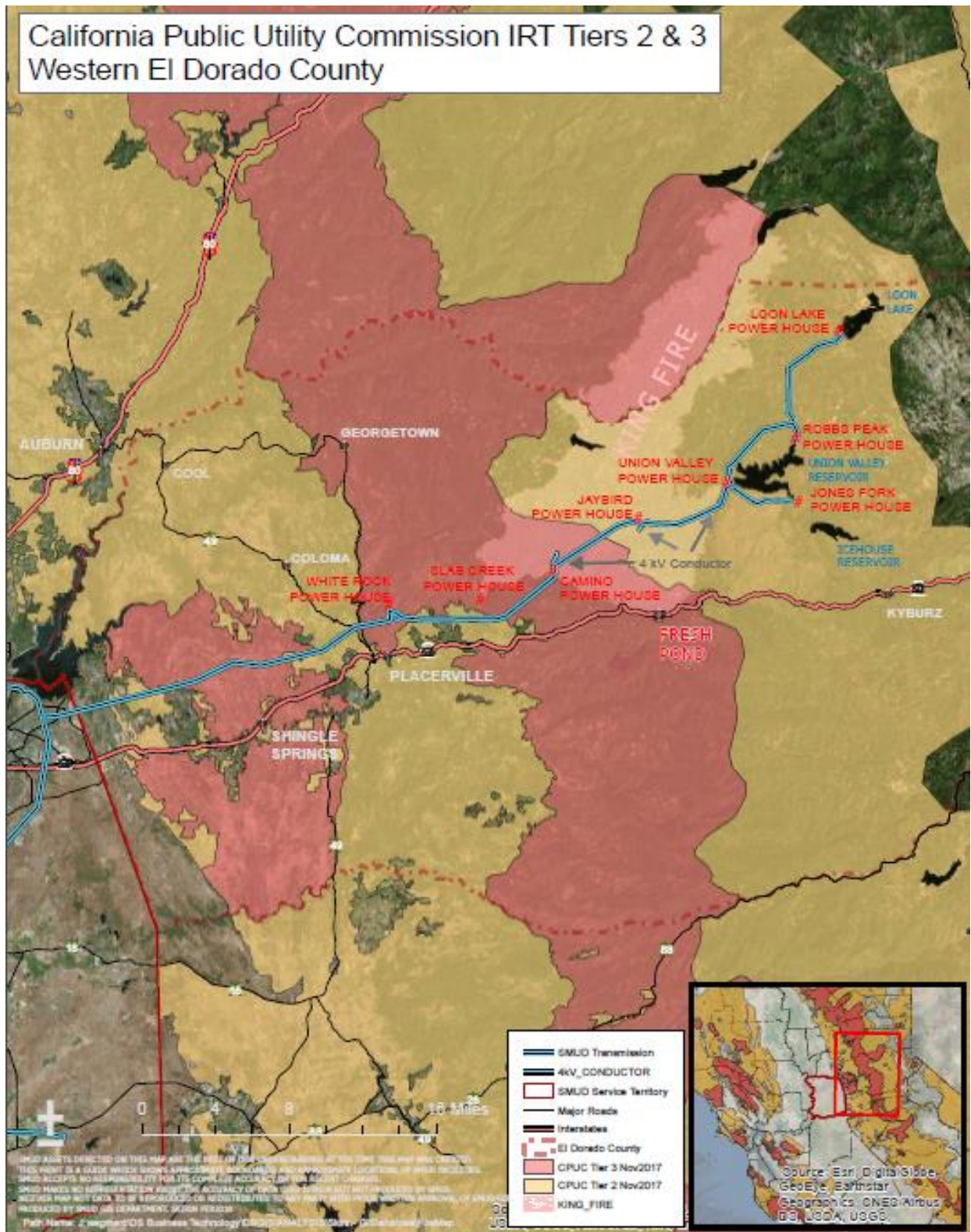


²⁰ Source: *State of California Public Utilities Commission*

SMUD's Plan Area within the HFTD has a higher susceptibility to wildfires specifically due to the Mediterranean climate which facilitates regular drought conditions as well as the natural plant communities that produce excess fuel, and the natural and anthropogenic ignition sources. SMUD's greatest fire threat risk is in the Western Sierra Nevada Mountain range, where the hydroelectric project known as the "UARP" is located. Within the UARP, vegetation adjacent to electrical infrastructure (powerhouses, transmission lines, switchyards, etc.) is a source of fuel. Extended periods of warm temperatures as well as greater numbers of diseased and dead trees may increase the possibility of wildfires occurring in SMUD's generation and service territories.

SMUD imports a large portion of the energy needed to serve its customers from out of its service area through the Western Area Power Authority transmission lines. These lines traverse many areas susceptible to wildfires. Actual destruction of such lines does happen, but this is not the most common threat. When a fire threatens long distance transmission lines, grid operators will derate the line. This means that less than the scheduled amount of power will be allowed to be carried by the line. This is done to reduce the amount of power which would be suddenly lost if the line were to be damaged. During heavy load periods, SMUD may not be able to obtain enough power from other sources to make up for the power lost from the derated line. Figure 12 below shows the area of the CPUC Fire Threat Map specific to SMUD's UARP.

Figure 12: CPUC Tier 2 and Tier 3 areas for SMUD's UARP



In addition to the UARP, open lands where SMUD’s assets lie also pose a risk related to grass fires. Grass fires can travel very fast and threaten nearby residential areas as well as critical infrastructure.

Frequency & Severity

SMUD electric systems include several energized features that inherently possess the risk of wildland fire hazard, with the potential to affect other infrastructure as well as structures in the surrounding areas. Even with little change in their frequency, the wildfires that California sees on an annual basis can still pose a threat to electricity infrastructure for SMUD. Physical infrastructure in the direct path of a fire can see extensive damage, especially smaller lines, often fitted with wooden poles. Soot collecting on equipment and ionized particulate matter in the air can cause leakage currents or arcing. Firefighting measures can foul lines, requiring extensive cleanup or repair after the fire is cleared. Transmission lines are affected by high heat, smoke, and particulate matter of the fire. therefore, lines may be shut down as a safety measure.

Much of SMUD’s electricity is imported using transmission lines through wildfire-prone lands. Due to multiple climate factors, critical transmission lines will be operating near their limits in the future. Wildfire events will further strain the system and its ability to deliver reliable power to SMUD customers.

Rural communities within El Dorado County that are situated in heavily forested areas are particularly vulnerable to wildfire. Fire can also impact the general community by damaging infrastructure such as roads, telecommunication systems, and community buildings.

Past Events

SMUD has never experienced a catastrophic wildfire involving its facilities. SMUD’s service area in Sacramento County has a much lower wildfire risk profile than other areas in the State that have suffered destructive wildfires in recent years. When ignition events occur, they have historically been limited in scope. This is largely due to SMUD’s more urban environment, flatter accessible terrain, low grasslands and other fuel sources outside forested areas and fewer wind events.

According to CalFire’s website, the five-year average between January – July time period is 3,067 fires and 28,875 acres burned. In 2022, the state endured 7,477 fires covering 331,360 acres. For the periods from January 1, 2023, to July 1, 2023, California endured 2,251 fires spanning 7,601 acres.²¹ This number continues to grow.

Large fires have been a part of the landscape history of the State of California, specifically, El Dorado County for centuries. Table 22 lists the most significant fires that have occurred near the Plan Area.

²¹ Source: CalFire

Table 22: Large Wildfires near SMUD Plan Area from 1916 to Present		
Fire Name	Year	Acres Burned
Unnamed	1916	2,131
Unnamed	1916	4,306
Bottle Hill	1917	1,326
Badger Hill	1924	638
Camp 7	1959	10,225
Ice House	1959	19,099
Unnamed	1960	11,212
Kelsey Mill	1961	11,815
Pilliken	1973	10,313
Chili Bar	1979	6,927
Cleveland	1992	22,518
Fred's	2004	7,560
King	2014	97,717
Delta	2018	63,311
River (Mendocino Complex)	2018	48,920
Stone	2018	39,387
Hirz*	2018	46,150
July Complex*	2020	83,261
LNU Lightning Complex*	2020	363,220
Caldor	2021	221,835
Fawn*	2021	8,578
Mosquito	2022	76,788
*Near TANC Transmission Lines		

It is known from 1900, and earlier, that large fires occurred in this part of the Sierra Nevada Mountains, and frequent fire return intervals (2-20 years in lower montane zone areas around Camino, Placerville, and Pollock Pines). Foothill regions of such, as where the UARP is located, burn frequently with mixed severity.

The most notable recent wildfires are the Caldor and Dixie fires in 2021, the King Fire in 2014, the Fred's Fire in 2004, and the Cleveland Fire in 1992. Historically, areas above 5,000 feet were less likely to see a major fire (between Robbs Peak and Loon Lake), with one major fire, Bottle Hill, in 1917 near Gerle Creek Reservoir. Several large fires have periodically burned in the lower elevation canyon areas near White Rock Powerhouse, the most recent being the Chili Bar Fire in 1979.

Although the Caldor and King fires did not substantially damage hydroelectric infrastructure, they did do major damage to the forest and watersheds around the UARP.

According to the U.S. Forest Service in El Dorado County, it is unlikely for any treatments or post fire timber harvesting to be conducted in the steep canyons where much of the hydroelectric infrastructure is located. A recent study indicates that without post fire logging or surface fuel treatments, woody fuels accumulate at a rate that exceeds the decomposition rate.²² As fuel accumulates, so does the fire hazard in the UARP area.

11.1.3 Secondary Impacts

The aftermath of wildfires can see increases in debris runoff as infiltration capacity of soil is reduced in the wildfire area, especially during rain events within the two years following a significant fire. Heavy rain events following a fire may also allow water to infiltrate the loose ground soil, increasing the potential for landslides. Large swings in rainfall from season to season can encourage vegetation growth in rainy periods, leaving more fire feedstock during subsequent dry seasons and priming conditions for the spread of wildfires.

Runoff from heavy rain events also affects the production of hydropower systems that are downstream from fire prone areas, as wildfire soot and residue collect in the waterways which feed the plant. This silt and particulate matter can reduce production or even damage the turbines.²³ As precipitation patterns change in the coming decades, the aftereffects of wildfires could increase concerns for the impact on SMUD infrastructure from runoff, vegetation growth, and landslides.

11.1.4 Exposure and Vulnerability

Fire also can damage the UARP infrastructure, which includes transmission lines, powerhouses, project roads, and penstocks. Recreationalists at UARP campgrounds are particularly vulnerable if access routes are destroyed or blocked during fires. Fuel reduction treatments, including thinning, brushing, removal of forest slash and mastication along the project corridors and around powerhouses can reduce such risks. Fire also creates indirect impacts on UARP operations. Land erosion associated with denuded hillslopes, for example, can increase sedimentation of reservoirs and degrade water quality.

Recreation facilities associated with the UARP can be damaged directly by the fire, requiring lengthy periods of reconstruction. The loss of the aesthetic value of surrounding forests can also depress recreation during the long process of forest regeneration, which can have a negative effect of the economy for several years.

11.1.5 Current Mitigation Efforts

As a condition of the FERC fifty-year license authorizing SMUD to operate the UARP, SMUD is required to file with FERC, a Fire Prevention and Response Plan (FPRP) developed in consultation with appropriate State and local fire agencies and approved by the USFS. SMUD's FPRP filed with FERC was developed in consultation with the USFS, BLM and CalFire.

²² Peterson, David, Richy J. Harrod, 2010 (May) Fuel Succession, Post-Fire Logging, and Future fire Behavior: Addressing the "Reburn Problem," Final report to the Joint Fire Sciences Program, Project Number: 06-3-4-16

²³ CEC. (2016). *Cal-Adapt Climate Tools*. Retrieved from CEC: <http://cal-adapt.org/tools/>

The FPRP provides in depth fire risk analysis of SMUD’s most fire vulnerable regions as well as historical data, roles and responsibilities and prevention/preparedness activities.

SMUD regularly coordinates with local fire agencies and other first response agencies. It also participates with emergency operations activities in its system areas. SMUD has robust Vegetation Management (VM) programs with accelerated and targeted VM work (pruning & removal) cycles and is using enhanced technologies including LiDAR and Ortho Imagery (these technologies can help identify diseased trees and trees that are a risk to SMUD facilities). It also has robust asset inspection and maintenance programs that include traditional aerial patrols with helicopters, IR inspections using helicopters (which can detect heat from power equipment before an event occurs) and regular ground inspections of all facilities (including core testing of the wood poles).

SMUD maintains a Wildfire Mitigation Plan (WMP) that is reviewed and updated on an annual basis. The plan identifies the risks, SMUD’s wildfire management programs/process, and additional mitigations where necessary. In addition, it also outlines SMUD’s customer, community and stakeholder outreach and communications during de-energization events.

Table 23 depicts the activities SMUD utilizes to address specific wildfire risk factors.

Table 23: Activities that Address Wildfire Risk Factors²⁴	
Risk Factor	Activity
Fuel	Vegetation management. Fuels reduction. Use of LiDAR and Ortho Imagery.
Equipment/facility failure	Routine maintenance Focused design and construction standards to reduce ignition sources (e.g., use of non-expulsion fuses and arrestors, replacement of wood poles, undergrounding and other options). Transmission and distribution line detailed inspections and annual patrol. No reclosing during fire season Intrusive pole testing and pole replacement. De-energization of lines during certain conditions.
Contact from object(s)	Animal/bird guards. Raptor construction (increased line spacing). Increased vegetation clearances (at time of work).
Wire to wire contact	Weather station and monitoring.
Other	SMUD worker/contractor education on fire ignition sources from normal work activities. Fire watch (30 minutes after work completion in high-risk areas).
Private and public agency coordination	SMUD coordinates and collaborates with private and public entities to identify projects that are mutually beneficial and to improve forest health.

²⁴ SMUD, 2023-2025 Wildfire Mitigation Plan, https://www.smud.org/-/media/Documents/In-Our-Community/Safety/Wildfire-Safety/WMP_2023-2025_rev1_FinalPublish.ashx, October 12, 2023.

SMUD continues to meet or exceed vegetation clearance requirements and other industry standards. SMUD has also identified a series of measures for its entire electric system intended to prevent wildfires from occurring, minimize the spread of any fire that does occur, and improve the resiliency of its system. These measures include the installation of Cal-Fire approved exempt material to reduce the risk of sparking; the strengthening of equipment exposed to strong wind conditions, and the increased monitoring of, and identified response²⁵ to, fire conditions.

SMUD uses Geographic Information Systems (GIS) mapping of wildfire hazard areas to analyze and plan infrastructure development. It also addresses and continuously reevaluates its assets for the density and quantity of developments, emergency access, landscaping, and water supply. SMUD performs regular patrols of vegetation and obstruction around SMUD facilities in areas that are specifically designated by CalFire as hazardous. SMUD has cyclical weed clearing and tree-trimming programs for all its equipment, regardless of the area's fire risk.

SMUD practices fuel management activities that are essential in establishing the desired levels of fire protection, while also minimizing the detrimental impacts of vegetation removal on the local terrain. Fuel management activities include grazing, prescribed burns, firewood collection of hazardous fuels, mechanical vegetation removal, and limited chemical vegetation control. SMUD has special approval from local agencies to remove vegetation with increased "fuel ladder" potential that exist outside SMUD's right of way. A "fuel ladder" is any vegetation that would allow fire to climb into the tree canopy. In addition, SMUD works with property owners to identify and perform tree pruning and removal on private property. SMUD works with the property owners to ensure they understand the work needed to ensure public safety and reliability. See Figure 13 below for examples of vegetation management clearing of distribution right of ways.

²⁵ The identified responses include operational procedures for the de-energization of lines during high fire threat conditions, and operational protocols for disabling the use of reclosing functionality on our transmission lines within the high fire threat areas and on our distribution lines during fire season in areas of high vegetation.

Figure 13: SMUD Vegetation Management



Table 24 depicts current wildfire fire mitigation plans, programs and efforts SMUD utilizes.

Table 24: Current Wildfire Hazards Mitigation ²⁶	
Mitigation	Description
Wildfire Mitigation Plan	SMUD maintains a Wildfire Mitigation Plan (WMP) that is reviewed and updated on an annual basis. The plan identifies the risks, SMUD’s wildfire management programs/process, and additional mitigations where necessary. In addition, it also outlines SMUD’s customer, community and stakeholder outreach and communications during de-energization events.
Vegetation Management Program	SMUD maintains a vegetation management program. Trees are trimmed on one-, two-, or three-year reoccurring cycles within SMUD’s Plan Area, and 18 months for those trees identified as fast growing. SMUD also removes trees with high fuel ladder potential (vegetation that allows fire to climb up into the tree canopy). This may include the elimination of hazardous trees outside of SMUD’s right-of-way.
Supplier joint response coordination	Since much of SMUD’s critical assets and replacement parts are unique or made to order and the lead-time for manufacturing and delivery of these materials could take up to a year. It is important for the continued operation of the power grid to

²⁶ SMUD, 2023-2025

Table 24: Current Wildfire Hazards Mitigation²⁶

Mitigation	Description
	maintain the health and safety of our community, to participate in a supplier joint response coordination. The coordination allows SMUD to borrow from participating utilities and suppliers, key assets for immediate use.
Transmission and distribution line patrol	SMUD performs transmission and distribution line patrols, whereby staff physically inspects transmission and distribution corridors and lines, by either land or air, on a fixed interval.
Emergency Operation Center (EOC)	SMUD maintains an EOC to help coordinate real-time incident command, response, and recovery from all emergencies, including those resulting from fire hazards.
Regional agency response coordination	Focus on active participation in city, county, and state emergency management structures for assuring coordinated responses to emergencies.
UARP Fire Management and Protection Plan	SMUD’s vegetation management plan with the U.S. Forest Service and other agencies regarding fire prevention and response. The plan includes hazard tree removal and trimming, and transmission line corridor clearing to protect critical hydro assets.
Annual Pole Clearing Program (Compliance with CA Public Resource Code Section 4292)	Requires the clearing of vegetation from the base of utility poles to a radius of 10 ft. in areas of mountainous land, forest-covered land, brush-covered land, or grass-covered land. This applies to certain parts of the SMUD service territory. Additionally, SMUD performs vegetation clearing around poles that are adjacent or across from CalFire’s State Responsibility Area (SRA) boundary lines.
Accessibility	Increased fuel management and fuel reduction in open space, creeks, around critical facilities, and urban/wildland interface areas. Maintaining and improving access to fire prone areas.
Resiliency	Planting of fire resilient vegetation.
Signage	Providing and maintaining proper fire access signage.
Fire roads	Construct and maintain fire roads and fuel breaks on watershed property to facilitate fuel management and provide safe emergency access.
Strategic fuel modification network	Barriers to wildland fire, fire roads, greenbelts, riparian areas, and low hazard vegetative types are interlinked into a network for wildland fire control.
Purchasing fire retardant insulating fluid (FR3) in our distribution transformers	SMUD began purchasing and installing pad mounted and pole mounted transformers with FR3 fluid in 2004. All new distribution transformers installed since 2004 moving forward contain FR3 fluid. This includes replacements and new installations.

Table 24: Current Wildfire Hazards Mitigation²⁶

Mitigation	Description
Substation transformer oil testing	SMUD performs oil sampling and testing on substation class transformers on a fixed interval to monitor gasses and other contaminants. Monitoring the gasses has allowed us to prevent failures that could result in oil expulsion and spills. The intervals are shortened where certain thresholds are met.
Visual and Infrared (IR) inspections on substation equipment	SMUD performs Visual and IR inspections on substation equipment on a fixed interval. The inspections allow crews to identify potential hazards and problems. Issues found are corrected based on severity of the problem and nature of the equipment.
Automatic reclosing	All Valley 115 kV, 230 kV and UARP 69 kV, 230 kV transmission auto reclosers are disabled and will remain disabled to mitigate wildfire risks. SMUD disables automatic reclosing on certain substation and line reclosers that extend into the Pole Clearing Area (PCA) during fire season.
De-energization	De-energization of lines based on pre-determined conditions.
Purchase larger substation plots	Land for new substations is purchased large enough to allow transformers to be installed with adequate space around them to allow for fire breaks. The extra space also allows the transformers to be installed far enough away from potential structures on adjacent property to minimize the risk of urban structure fires.
System enhancement capital projects	Install non-expulsion devices in PCA Replace #6 copper conductors with heavier gauge aluminum. Upgrade existing 12kV feeders to SCADA reclosers in PCA Strengthen fire break valve via UARP Fuels Reduction.

11.2 Wildland-Urban Interfaced Structural Fires

11.2.1 General Background

Wildland-urban interfaced structural fires refer to the fire potential of development interspersed within, or adjacent to, landscapes that support wildland fire. Urban is defined as an area with greater than one housing unit per acre.

Wildland-urban interfaced structural fires have become an increasing concern especially in the aftermath of the Maui fire where a fast-moving fire roared down the west side of the island. A combination of drought, abundant vegetation and high winds could increase the experience of urban land fires.

11.2.2 Hazard Profile

Location

Wildland-urban interfaced fires have the greatest effect in locations where development has expanded into rural areas. Urban fires pose an increased threat to that of standard wildfires, as they can spread quickly between structures that are placed within close vicinity of one another. The community, critical infrastructure, and public safety are each affected by wildland-urban interfaced fire damages. SMUD owns, partially own or operates infrastructure in wildland-urban interfaced areas at potential risk of impacts resulting from wildland-urban interfaced fires.

Frequency and Severity

The severity of wildland-urban interfaced fires is influenced by a multitude of components, including the vegetative fuel in the area of the fire, the weather conditions, and the slope of the land. California and local agencies have adopted building codes that reduce the risk of fire embers igniting buildings. Building codes assist with reducing the frequency and severity of wildland-urban interfaced fires. However, climate change increases the risk of wildland-urban interfaced occurrence and the potential for higher rates and severity of fires increase as people move closer to fire-susceptible wildland areas.

Past Events

SMUD has not experienced an impact to its infrastructure as a result of a wildland-urban interfaced fire.

11.2.3 Secondary Impacts

Potential secondary effects of a wildland-urban interfaced fire include utility failure, poor air quality, and hazardous materials spill.

11.2.4 Exposure and Vulnerability

A wildland-urban interfaced fire affecting a SMUD owned and operated structure could result in much more than structural damage. Communication systems, energy delivery systems, critical medical services, transportation infrastructure, and all other crucial societal functions powered by energy have potential to be damaged by urban structural fires.

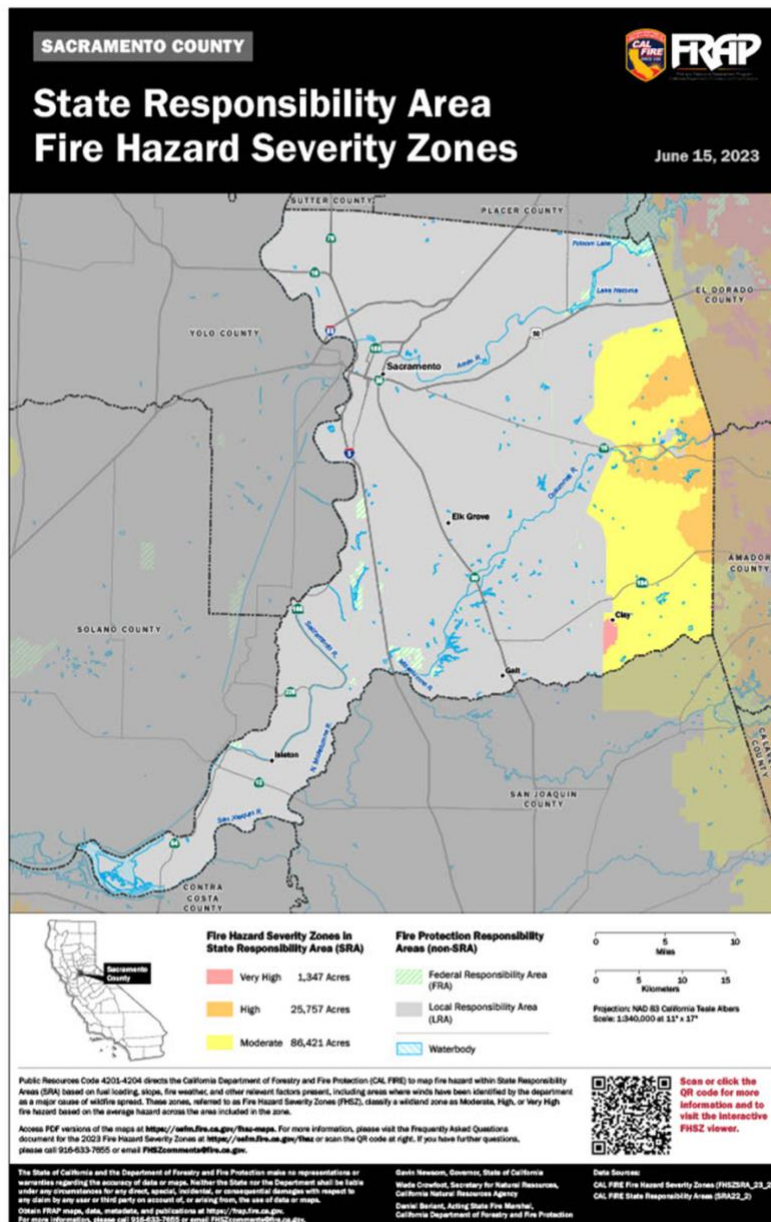
The State Fire Marshal is mandated to classify lands within State Responsibility Areas into Fire Hazard Severity Zones.

The Fire Hazard Severity Zone maps are developed using a science-based and field-tested model that assigns a hazard score based on the factors that influence fire likelihood and fire behavior. Many factors are considered such as fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather for the area. There are three levels of hazard in the State Responsibility Areas: moderate, high, and very high.

Sacramento County is not at high risk, relative to other counties in California, of urban fire hazard (See Figure 14). However, the surrounding counties of Yolo, Solano, San Joaquin, Costa, Placer, and Sutter are all “high” ranked wildfire hazard areas.²⁷ A wind event combined with a wildfire event in a bordering county would put SMUD at an increased risk for a wildland-urban interfaced fire hazard event.

Figure 14 depicts the map developed by the State Fire Marshal’s office illustrating the Fire Hazard Severity Zones for Sacramento County.

Figure 14: Fire Hazard Levels in Sacramento County²⁸



²⁷ Source: 2018 California State Hazard Mitigation Plan

²⁸ Source: Department of Forestry and Fire Protection

Figure 15 depicts the map developed by the State Fire Marshal’s Office illustrating the fire threat predictions for SMUD’s service area as well as additional areas with SMUD facilities and infrastructure. Figure 16 depicts the map developed by the California Public Utilities Commission illustrating the fire threat predictions for SMUD’s service area as well as additional areas with SMUD facilities and infrastructure.

Figure 15: CAL Fire - Fire Threat Predictions around SMUD Service Area

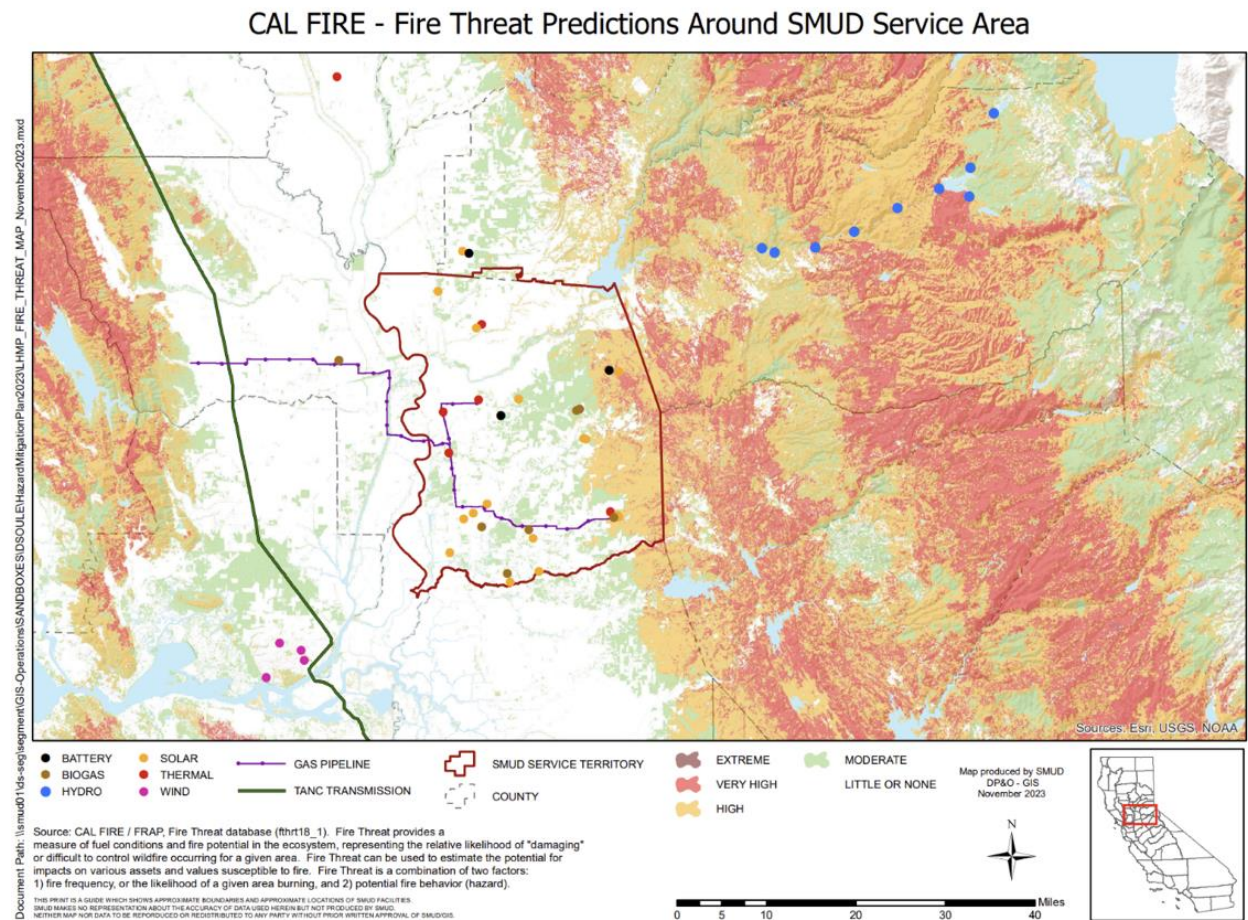
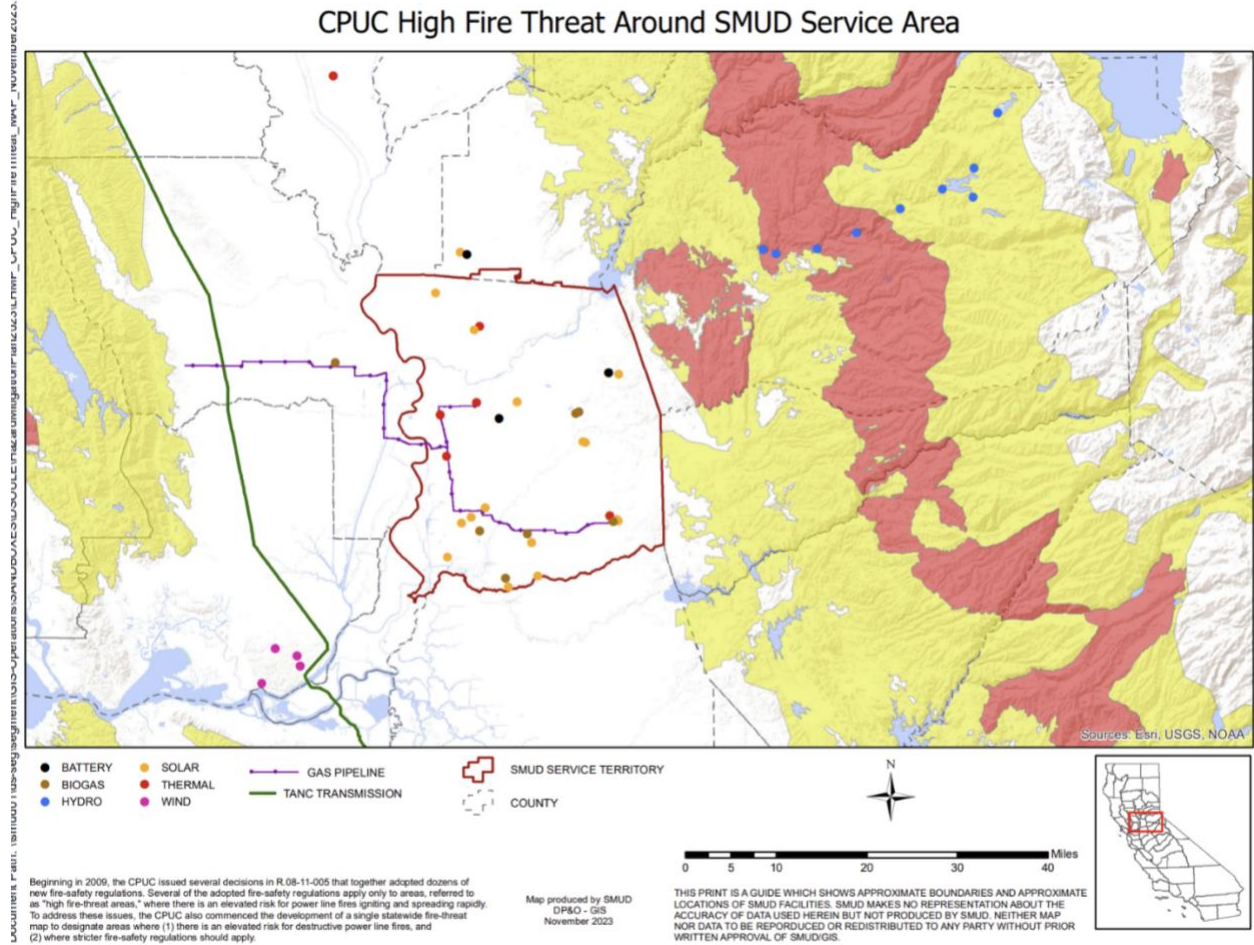


Figure 16: CPUC High Fire Threat around SMUD Service Area



Beginning in 2009, the CPUC issued several decisions in R 08-11-005 that together adopted dozens of new fire-safety regulations. Several of the adopted fire-safety regulations apply only to areas, referred to as "high fire-threat areas," where there is an elevated risk for power line fires igniting and spreading rapidly. To address these issues, the CPUC also commenced the development of a single statewide fire-threat map to designate areas where (1) there is an elevated risk for destructive power line fires, and (2) where stricter fire-safety regulations should apply.

11.2.5 Current Mitigation

Table 25 depicts the current wildland-urban interface structural fire mitigation efforts SMUD utilizes.

Table 25: Current <i>Wildland-Urban Interface</i> Structural Fire Hazards Mitigation	
Mitigation	Description
New SMUD construction follows California’s Building Code	California’s Wildland-Urban Interface Code serves to establish minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area to resist the intrusion of flames or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses. SMUD complies with the California Building Code and Wildland-Urban Interface Code for all of its structures located within State Responsibility Areas and Urban Wildland Areas regardless of the areas’ fire risk.
Establishing defensible space	SMUD also implements the creation of defensible space, or the removal of fuel bearing vegetation within 100 feet of a structure.
Prescribed burning	At times, SMUD will support prescribed burning to reduce fuel loads that threaten public safety and property.
Management and maintenance of existing structure	Continually monitor and update facilities and infrastructure to comply with regulatory requirements and fire safety standards.
Survey areas	Spray areas already cleared to maintain vegetation around facilities. Survey areas for potential vegetation removal.

12.0 Water Rise Hazards

This section will cover flood and other water rise hazards collectively. These water rise hazards include:

- Flood and flash floods
- Riverine, stream and alluvial flood hazards
- Sea level rise, coastal flooding, and erosion hazards
- Tsunami and seiche hazards
- Levee failure
- Dam failure

12.1 Flood and Flashflood

12.1.1 General Background

Flooding occurs when a body of water rises and overflows onto “normally” dry land. Floods are the most common of all weather-related natural hazards and can happen during heavy rains, when ocean waves come on shore, when snow melts quickly, or when dams and levees break. Flooding can result in significant damage to structures, landscapes, utilities, and human life.

12.1.2 Hazard Profile

According to the National Oceanic and Atmospheric Administration (NOAA) National Severe Storms Laboratory, “damaging flooding may happen with only a few inches of water, or it may cover a house to the rooftop. Floods can occur within minutes or over a long period, and may last days, weeks, or longer. Floods are the most common and widespread of all weather-related natural disasters.”

Flash floods are the most dangerous kind of floods because they combine the destructive power of a flood with incredible speed. Flash floods occur when heavy rainfall exceeds the ability of the ground to absorb it. They also occur when water fills normally dry creeks or streams or enough water accumulates for streams to overtop their banks, causing rapid rises of water in a short amount of time. They can happen within minutes of the causative rainfall, limiting the time available to warn and protect the public.

Location

Flooding occurs in every part of the United States (U.S.) and is a catastrophe around the world. In the U.S. floods kill more people each year than tornadoes, hurricanes, or lightning.

Densely populated areas are at a higher risk for flashfloods as roadways, buildings and other structures increase runoff by reducing the amount of rain absorbed by the ground.

Most of SMUD’s transmission and power generation infrastructure and equipment are located in areas that are less populated. Most of SMUD’s distribution infrastructure and equipment are located within more densely populated areas. However, SMUD does own transmission in Sacramento County in very urban areas. SMUD’s infrastructure is susceptible to both floods and flashfloods.

In addition, Sacramento, where SMUD’s Headquarters Campus and East Campus Operation Center are located, is located by many rivers, lakes, levees, and dams, which have the potential of flooding.

Frequency and Severity

According to the State of California’s Multi-Hazard Mitigation Plan, flooding is widespread and the second most frequent disaster source in the State. Flooding is the most frequent and costly natural hazard in the United States, a hazard that has caused more than 10,000 deaths since 1900. Approximately 90 percent of presidentially declared disasters result from natural hazard events with flooding as a major component. The Plan Area, specifically Sacramento, has the greatest risk of flooding of any major city in the country. ²⁹

²⁹ Sacramento County Water Resources

<http://www.waterresources.sacounty.net/stormready/Pages/Region's-Flooding-History.aspx>

Past Events

The most notable flooding in the Sacramento area occurred in 1986, 1995, 1997, 2006, and 2023. Table 26 shows available data found for most recent flood events in the National Climatic Data Center (NCDC) database for the Plan Area.

County/Zone	Date	Deaths	Injuries	Property Damage \$	Crop Damage \$
Motherlode Camptonville	12/12/1996	0	0	0	0
Southern Sacramento Valley	12/12/1996	0	0	0	0
Northern Sacramento Valley	12/29/1996	0	0	20K	0
Southern Sacramento Valley	2/2/1998	0	0	4.3M	7.8M
Northern Sacramento Valley	2/2/1998	1	0	20.8M	6.5M
Carquinez Strait and Delta	2/2/1998	1	0	0	0
Central Sacramento Valley	2/2/1998	0	0	0	0
Yolo West, North East Solano, Sacramento	1/23/2000	0	0	0	0
Sutter	1/1/2006	0	0	900K	0
Solano	1/1/2006	1	1	15M	0
Sacramento	1/1/2006	0	0	4.5M	0
El Dorado	1/1/2006	0	0	3.2M	0
San Joaquin	4/2/2006	0	0	250K	50K
Sacramento	1/3/2017	0	0	0	0
Sacramento	12/26/2022	5	0	0	0
Sacramento	1/3/2023	17	--	123.8M	--

12.1.3 Exposure and Vulnerability

If flooding were to occur in the Plan Area, impacts could include loss of life, reduction of grid reliability, damage to infrastructure and increased safety risks. Within 6 hours of heavy rain, area rivers and tributaries become swollen and can even begin to overspill their banks in a few places, especially in historically vulnerable locations: small streams, creeks, canals, and drainage ditches tend to overflow. Normally dry gullies or dry creek-beds become alive. In flatter terrain, expanded areas of inundation occur around low-lying spots covering several secondary roads. In urban places, expanded areas of inundation occur at several underpasses or poor drainage spots, with some streets and parking lots taking on moving water. Storm drains and retention ponds overflow. In mountain areas, considerable run-off moving fast down the valley washes out some roads, especially in river valleys. Hillsides vulnerable to erosion become a concern for mudslides. Overall, flash flooding impacts buildings and roads with several evacuations necessary; damage is moderate.

Flooding, erosion, and debris flows commonly occur in California during periods following large, hot fires. Wildfires greatly reduce the amount of vegetation and affect the soils, which in turn reduces the capabilities for the terrain to absorb rainwater. This effect allows for excessive water runoff that will often carry large amounts of debris. Structures located near a major burn area are most susceptible to flooding.

SMUD's Plan Area has experienced flooding periodically during and following major storms. This is a natural incident, given that the City of Sacramento is located at the confluence of two major rivers. It was commonly believed prior to 1986 that the levees containing the Sacramento River and the American River were of sufficient height and stability to protect the City of Sacramento from 100-year or greater storms. However, the storms that occurred in February 1986 demonstrated that those levees are not sufficient. Not only was the City of Sacramento at risk from the water flowing through the Sacramento and American Rivers, but also from the tributaries and streams that flow into those rivers, particularly Natomas East Main Drainage Canal, Arcade, and Magpie Creeks in the north and Morrison Creek stream group in the south that eventually flows into Beach Lake and returns to the Cosumnes watershed. As a result, the Sacramento Area Flood Control Agency (SAFCA) was formed to work with State and Federal authorities to identify and construct levee improvements and other facilities to provide 200-year level of protection for the City of Sacramento on the American River system. This work is still ongoing.

SMUD will likely encounter direct and indirect impacts from sea level rise and flooding in the next several decades. While sea level rise and flooding are each a concern of climate change, the impacts compound in the Sacramento region due to the interconnected nature of snowmelt from the Sierras and ocean access from the Sacramento-San Joaquin Delta (the Delta). SAFCA suggests that Sacramento has the greatest risk of flooding when compared to all other cities in the United States.³⁰

12.1.4 Future Trends in Development

Sea level along California's coast has risen approximately 7 in. in the last century,³¹ and this rate is expected to accelerate south of Cape Mendocino 5 – 24 inches (5 in – 2 ft.) by 2050 and 17 – 66 inches (1.4 - 5.5 ft.) by 2100 relative to a 2000 baseline dependent on specific carbon emissions scenarios.³² With current sea-level rise conditions, the Risky Business Project predicts that roughly \$8-\$10 billions of existing property in California could be flooded by 2050 with an additional \$6-\$10 billion susceptible to flooding at high tides.³³

³⁰ SAFCA. Flood History – Sacramento Flood Threat. Accessed on July 11, 2014.

<http://www.safca.org/floodhistory/floodthreat.html>

³¹ California Climate Change Center. 2012. Our Changing Climate 2012 Vulnerability & Adaptation to the Increasing Risks from Climate Change in California – Brochure. Publication # CEC-500-2012-007. Retrieved from http://climatechange.ca.gov/climate_action_team/reports/third_assessment/

³² What Threat Does Sea-Level Rise Pose to California? Legislative Analyst's Office. (2020, August 10). Retrieved March 17, 2022, from <https://lao.ca.gov/Publications/Report/4261>

³³ Risky Business Project. 2015. The Economic Risks of Climate Change in the United States: From Boom to Bust? Climate Risk in the Golden State. Retrieved from: <http://riskybusiness.org/report/from-boom-to-bust-climate-risk-in-the-golden-state/>

Combined with Sacramento’s particular vulnerability to flooding, sea level rise could have major implications to assets and infrastructure on which SMUD depends.

12.2 Riverine, Stream and Alluvial Flood Hazards

According to Sacramento County, numerous parcels and roads throughout the County not included in FEMA-100 and 500-year floodplains are subject to flooding in heavy rains. In addition to flooding, damage to these areas during heavy storms includes pavement deterioration, washouts, mudslides, debris areas, and downed trees. SMUD’s Plan Area is vulnerable to flood (riverine, stream and alluvial), sea-level rise, erosion, tsunami, landslides, severe thunderstorms, and tree mortality. There are many vulnerable public and private assets, crops, vulnerable communities (elderly, children, disabled, etc.), SMUD power assets, water facilities, etc. within SMUD’s Plan Area. If any of the above events were to occur, it could adversely impact first response services provided.

Riverine flooding happens when a watercourse exceeds its “bank-full” capacity. The event is generally a result of prolonged rainfall, or a combination of rainfall and snowmelt. In SMUD’s Plan Area, riverine flooding will occur most often between the months of November and April. The intense storms that happen during these months can overwhelm local waterways and compromise the integrity of flood control structures.

12.3 Sea Level Rise, Coastal Flooding and Erosion Hazards

Coastal erosion is a natural geomorphic process. Coastal erosion is accelerated by factors such as winter storms, tidal action, wind-generated high surf, wave action, and rising sea levels. Periods of heavy rain have resulted in the highest sea level readings along California’s coast. Climate change plays a significant role in rising sea levels and may increase the frequency of severe weather and winter storms.

Sea level rising has a significant impact on the environment. If coastal habitats are unable to migrate inland due to rising sea levels, they may become inundated by salt-water intrusion. This will result in land subsidence, a loss of habitat for fish and wildlife, and loss of aesthetic, recreational, and commercial uses.

SMUD has not been impacted by any instances of sea level rise, coastal flooding, or erosion hazards. It is anticipated that with climate change, SMUD could potentially be impacted by this in the future.

12.4 Tsunami and Seiche Hazards

A tsunami is a wave triggered by any form of land displacement along the edge or bottom of an ocean or lake. Tsunamis are rare and can quickly put the lives of coastal residents, business, and visitors in jeopardy. California is vulnerable to local and distant tsunamis, but tsunamis are typically more disastrous and threatening because they afford at-risk populations only a few minutes to reach safety.

A seiche is a standing wave in an enclosed or partially enclosed body of water. Seiches have been observed on lakes, reservoirs, bays, harbors and at sea. Seiches could cause damage to

wildlife and could result in flooding in the surrounding areas and destruction of port facilities.

SMUD has not been impacted by any instances of a tsunami or seiche. It is anticipated that with climate change, SMUD's Plan Area could potentially be impacted by this in the future. Some of SMUD's Plan Area is located near bodies of water prone to either tsunamis or seiche. Climate change is linked to an increase in the frequency and intensity of extreme weather events that influence seiche and tsunami conditions.

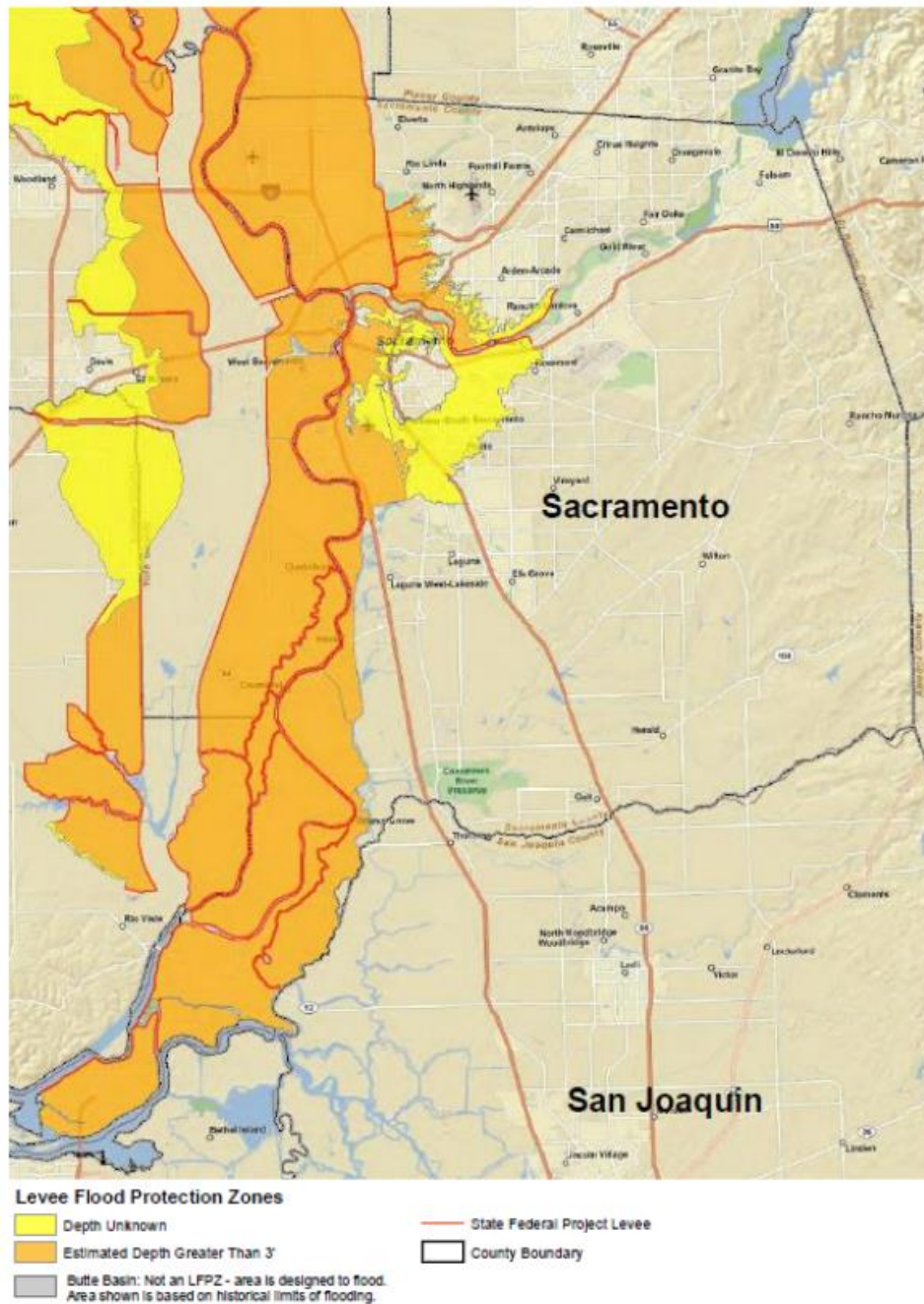
12.5 Levee Failure

A levee failure or breach is classified where a levee partially or completely releases the previously contained water to flood the land behind the levee. The two main reasons for levee breaches are erosion and overtopping. Erosion can be caused by natural elements such as the wind and water, which can create new or worsen existing damage of the levee. A majority of the urban center of Sacramento is dependent on the presence of levees (See Figure 17). A levee failure would be detrimental to SMUD's Plan Area.

Folsom Dam provides primary flood management for much of Sacramento County. The dam is operated in concert with other major dams on the Yuba, Bear, Feather, and smaller rivers to protect various areas from flooding. Levees protecting Sacramento could fail if water were released from Folsom Dam or other dams which could cause the American River or Sacramento River to rise above the top of the levees. The release capacity of Folsom Dam substantially exceeds the capacity of American River levees, and Sacramento could be flooded to protect the safety of Folsom Dam or other areas. This flood operation decision is the responsibility of the US Army Corps of Engineers.

A major flooding of downtown Sacramento would present great challenges for SMUD. Much of the California government would be without electrical power for many weeks, potentially even longer (months) due to supply chain impacts, first while floodwaters receded and then later while repairing the damage to the underground distribution system and other area assets. Many thousands of downtown employees would not be able to work and would suffer economic hardship. SMUD revenues would be impacted since key business and government customers would be unable to purchase electricity. Damage to highways such as Interstate-5, Interstate-80, State Route 99, US 50, and railroads could prevent shipment of necessary replacement parts like switchgear and transformers as well as preventing telecom companies from repairing their facilities to enable telecommuting.

Figure 17: 2021 Sacramento County Flood Protection Zones³⁴



Approximately 150 years ago, the levees of the Sacramento-San Joaquin Delta were raised to prevent flooding on some of the most fertile farmland in the nation. Levee failure is a high risk to SMUD due to SMUD’s Plan Area being surrounded by a network of 518 miles of levees.³⁴

³⁴ Source: [Sacramento County. 2021 Multi-jurisdictional Hazard Mitigation Plan Update – July 2021 Public Review Draft](#)

Areas subject to flooding because of a levee breach in SMUD’s service area are adjacent to the Sacramento, Cosumnes, Mokelumne, and American Rivers. In addition, various sloughs, creeks, and other drainage vehicles are subject to flooding. Other areas that flood periodically are low lying. The Sutter and Yolo bypasses afford an appreciable level of flood protection from Sacramento River overflows during the winter and spring months, leaving the American and Cosumnes River as the major slow-rise flood threat. Water from the Sacramento River overflows into these bypasses over the Tisdale, Fremont, and Sacramento Weirs.

The potential of a major, catastrophic levee failure on a major watercourse is like that of a levee overtopping on a secondary stream. The State/Federal River Forecast Center in Sacramento monitors the Sacramento, Cosumnes, Mokelumne, and American Rivers through a series of stations located along the rivers. The system affords a degree of advance flood warning for emergency responders.

12.6 Dam Failure

Since the 1850’s, hundreds of dams and reservoirs have been built in California. They have been built to provide water for populations and agriculture, to allow for flood control, as a source of hydroelectric power, and for recreation. The storage capacity of these reservoirs ranges from a few hundred acre-feet to 5,000,000 ac-ft. The water from these reservoirs eventually makes its way to the Pacific Ocean through several river systems.

Dam failure is defined as any uncontrolled release of water, and it does not need to be a complete and catastrophic failure of a dam. Depending on the nature of the failure, it can result in a small release of water, or it can lead to catastrophic flooding. Dam failure can be the result of a variety of natural or human-induced factors such as structural failure of the materials constituting the dam and/or spillways, dam overtopping due to flood conditions, earthquakes, sabotage, and inadequate maintenance and monitoring. In the event of a dam failure, the energy of the water stored behind the dam can cause rapid and unexpected flooding downstream, affecting multiple communities and river landscapes, resulting in loss of life and property damage. Secondary effects include loss of water supply or power generation.

SMUD owns the following dams:

Brush Creek Dam	Loon Lake Dam
Buck Island Dam	Rancho Seco Dam
Camino Dam	Robbs Peak Dam
Chili Bar Dam	Rubicon Dam
Gerle Dam	Slab Creek Dam
Ice House Dam	Union Valley Dam
Junction Dam	

There are several other dams not owned by SMUD, both within and outside SMUD's plan area, where a catastrophic dam failure would impact SMUD electrical system infrastructure and affect SMUD customers in myriad other ways.

12.6.1 Hazard Profile

SMUD's Plan Area has historically been subject to periodic flooding. Much of the flood risk in SMUD's Plan Area is a result of heavy rainfall and resulting stream and drainage canal overflows. Figure 18 below is the Flood Insurance Rate Map (FIRM) of SMUD's Plan Area, which shows special hazard areas and risk premium zones, as delineated by FEMA. There have not been any flooding related hazards because of SMUD's operations.

Flooding resulting from a dam failure can also result from any one or a combination of the following causes:

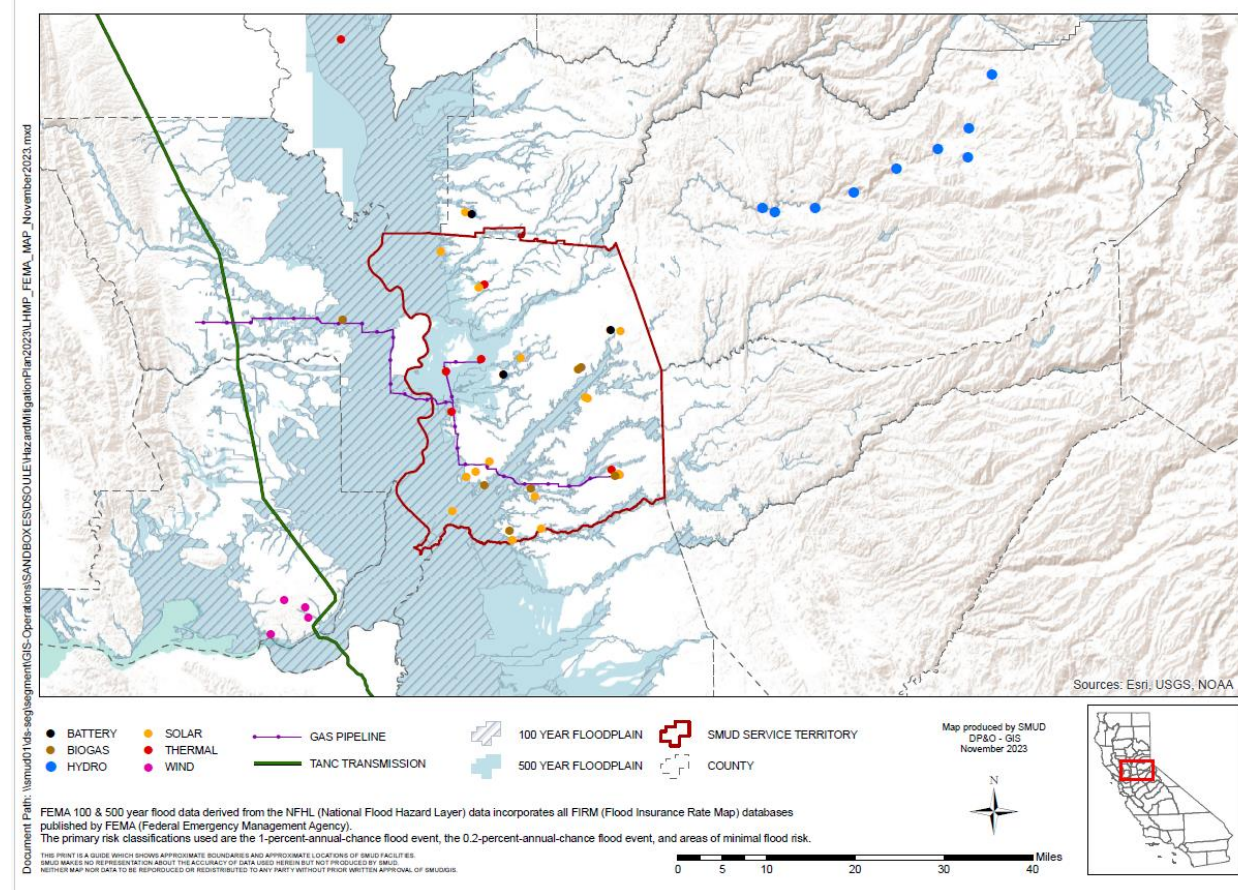
- Earthquake;
- Inadequate spillway capacity resulting in excess overtopping flows;
- Internal erosion caused by embankment or foundation leakage, piping or rodent activity;
- Improper design;
- Negligent operation; and/or
- Failure of upstream dams on the same waterway to name a few.

The California Department of Water Resources (CA DWR) Division of Safety of Dams (DSOD) and the Federal Energy Regulatory Commission (FERC) Division of Dam Safety and Inspections (D2SI) have dam safety regulatory oversight of SMUD's dams. They also assign hazard classifications to dams. Existing land use and land use controls (zoning) downstream of the dam are two factors considered in assigning hazard ratings. CA DWR DSOD uses four hazard classification categories:

- Extremely high hazard potential – expected to cause considerable loss of human life or would result in an inundation area with a population of 1,000 or more;
- High hazard potential – expected to cause loss of at least one human life;
- Significant hazard potential – no probable loss of human life but can cause economic loss, environmental damage, impacts to critical facilities, or other significant impacts;
- Low hazard potential – no probable loss of human life and low economic and environmental losses. Losses are expected to be principally limited to the owner's property.

SMUD owns 6 dams that are designated by CA DWR DSOD as high or extremely high hazard potential dams. They are the Loon Lake, Ice House, Union Valley, Slab Creek, Chili Bar and Rancho Seco Dams. The locations of all SMUD dams can be found in figure 18 below.

Figure 18: FEMA 100- & 500-Year Flood Plains around SMUD Service Area



In addition, dam failures have the potential to cause loss of life, damage to property, and other ensuing hazards, as well as the displacement of persons residing in or near the inundation path. Damage to electric generating facilities and transmission lines could also affect life support systems in communities outside the immediate hazard areas.

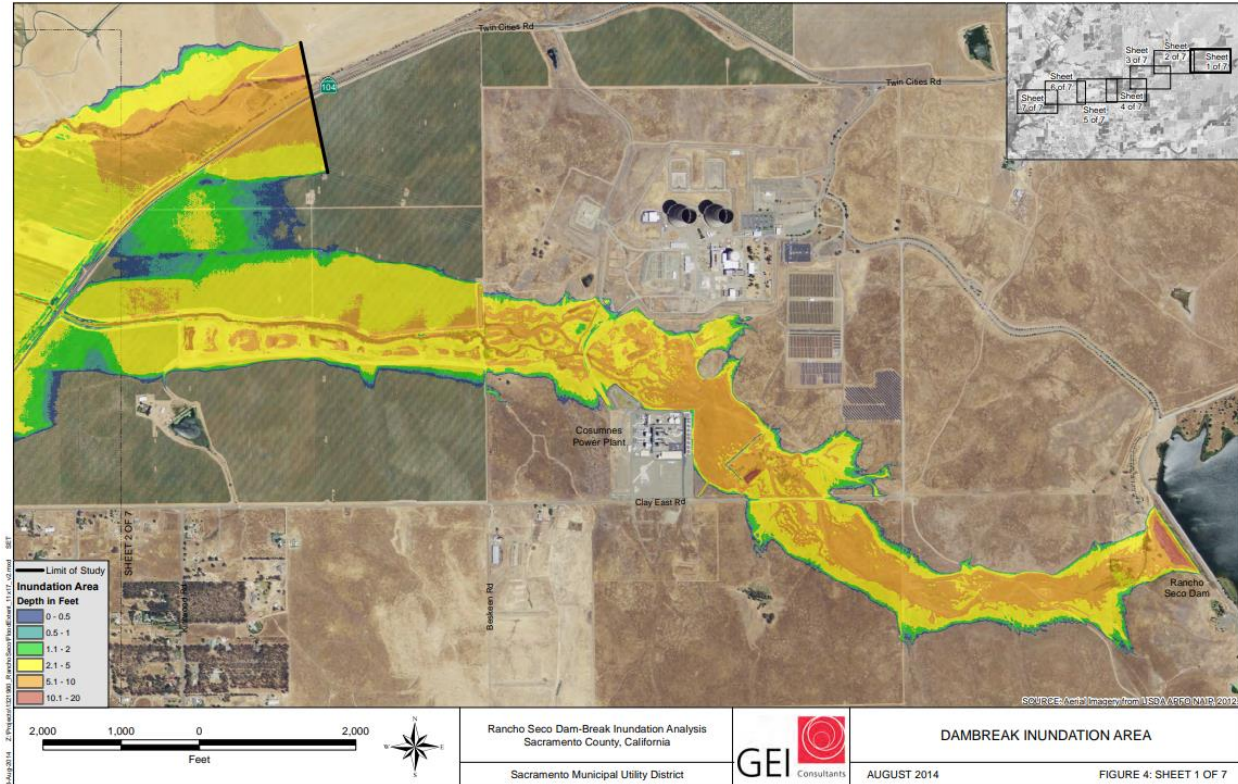
High Hazard Dam Assessment

A failure of one or more of SMUD’s high-hazard potential dams would impact communities downstream. Since 2014, all of SMUD’s high-hazard potential dams have had emergency action plans, EAPs. All EAPs and subsequent updates have been approved by the California Governor’s Office of Emergency Services as required by Senate Bill 92.

SMUD’s EAPs were developed through collaborative meetings and consultation with local emergency response agencies: the Sacramento County Office of Emergency Services, Sacramento County Sheriff’s Department Herald Fire Protection District, Cosumnes Fire Department, El Dorado County Office of Emergency Services, El Dorado County Sheriff’s Office, Placer County Office of Emergency Services, Placer County Sheriff’s Office and CalFIRE. In addition, California DWR Division of Safety of Dams, FERC D2SI, the National Weather Service, and the California DWR Division of Flood Management were consulted.

The EAP development process is extensive, it includes the development of technical reports and inundation maps. Figure 19 is an example shown of an inundation map of one of SMUD’s high hazard dams, Rancho Seco Dam.

Figure 19: Rancho Seco Inundation Map



Frequency and Severity

A catastrophic dam failure could exceed the capability of affected emergency response agencies. Damage control and disaster relief support would be required from other local governmental and private organizations, state and federal governments, and other utilities.

While some of SMUD’s dams are located upstream from unpopulated areas and large reservoirs, most are not. Failure of Union Valley Dam, for example, could result in widespread flooding of large parts of Sacramento and cause over 1,000 deaths.³⁵

SMUD continues to minimize the impact of dam failure on the local community by complying with the FERC and Cal OES requirements to engage in EAP activities associated with dam failure. An EAP process is a formal procedure that identifies potential emergency conditions at a dam and results in a series of coordinated actions to be taken by a variety of parties to minimize loss of life and property damage in the event of a dam failure. SMUD’s EAPs include:

³⁵ SMUD, 2022, Dam Failure Analysis and Inundation Map, Union Valley Dam, available from DWR website

- A set of procedures SMUD follows to notify downstream emergency management agencies. The sheriff’s office with jurisdiction of the downstream area is responsible for the emergency response. They are aware of the potential for dam failure in their area. Every five years emergency response agencies participate in a dam failure response exercise led by SMUD.
- A set of inundation maps recognize high priority dams to aid emergency management agencies in identification of critical infrastructure and/or communities at risk for warning and evacuation planning.
- A detailed plan of coordination and communication between SMUD and emergency management agencies that will apply in the event of emergencies related to actual dam failure at SMUD’s dams.
- EAPs are routinely reviewed and must be approved by Cal OES, Department of Water Resources Division of Safety of Dams, and FERC Division of Dam Safety and Inspections.

Past Events

None of SMUD’s dams have failed. Table 28 lists recent dam incidents in the Plan Area.

Year	Name	Extent of damage
1995	Folsom Dam	Spillway gate failure. Flooding confined to American River Parkway.
1997	Folsom Dam	Holes in floor of the conduit. No flooding occurred.
2017	Oroville Dam	Evacuation of 180,000 people. \$870 MM in damages.

12.7 Current Mitigation Efforts for Water Rise Hazards

The DWR Division of Safety of Dams assigns condition assessment ratings to California dams; all SMUD dams were assessed as satisfactory. Satisfactory is the highest rating indicating no existing or potential dam safety deficiencies are recognized. SMUD’s dam safety program continues to monitor, assess, and identify ways to mitigate any future potential impacts from a breach of our dams. For high hazard dams, additional dam performance monitoring and surveillance is performed that is required under licensed requirements.

Table 29 depicts the current water rise mitigation efforts SMUD employs.

Mitigation	Description
Flood Plain Management Plan	Comprehensive planning and floodplain management strategies that is updated regularly.
New infrastructure construction	Following all regulatory codes and considering flood hazards when planning and constructing. Prohibition of development in urban areas not protected up to the California code.

Table 29: Current Water Rise Hazards Mitigation

Mitigation	Description
Update infrastructure	Continuous dam performance monitoring and evaluation to identify necessary dam safety improvements.
Planning	Development of various flood emergency response plans.
EOC	SMUD maintains an EOC to help coordinate real-time incident command, response, and recovery from all emergencies, including those resulting from flood hazards.
Exercises	SMUD holds regular drills and exercises that focus on identifying any gaps in current response plans. Includes representatives from local, state, and federal agencies.
Flood communications coordination guidance	Focuses on internal and external communication during a flood event.
Elevation	Conducting studies and elevating structures and facilities in vulnerable areas as appropriate.
Water collection	Installation of strategic storm drains to increase storm water collection capacity in vulnerable areas.
Diversion systems	Construction of floodwalls and concrete swales as diversion systems.
Ongoing evaluation	Continued evaluation of potential risks and controls to determine future studies or mitigation initiatives as appropriate.
Repair and maintenance	Assessment for repair, replacement, or maintenance of underground pipelines to be more flood resistant in flood prone areas.
Continuous assessment and mitigation	SMUD continues to assess risks associated with dam failures and system hardening from water rise. Mitigations will be identified through this process and be prioritized for implementation as appropriate.

13.0 Earthquakes and Geological Hazards

SMUD’s Plan Area is susceptible to liquefaction, subsidence, landslides, earthquakes, and volcanic activity. Volcanic activity is a potential predecessor/cause of earthquakes whereas subsidence, liquefaction, and landslides can be products of earthquakes. Northern California is at high risk of earthquake and other geological occurrences due to the proximity of the San Andreas Fault system and several nearby volcanoes.

The loss of electric power due to earthquake can occur from many related effects of a violent ground shake. Landslides can damage power line structures (poles/towers), substations, and switchyards. Liquefaction can cause misalignment of the power train of electric plants. Other SMUD assets vulnerable to earthquake damage include natural gas pipelines, liquid storage facilities, water supply systems, dams, communication systems, transportation systems, and disposal systems. Most of these assets rely on electric power. A disruption in the supply of electric power could have extremely detrimental impacts to SMUD and the community. Damages to gas pipelines and excessive flooding could lead to loss of life and economic impact.

For example, a major earthquake could cause damage and possible failure of Nimbus and/or Folsom Dam. Evacuation of persons in the inundation area would be necessary. The damage and/or possible failure of either dam could severely damage SMUD's energy system. It is not feasible to accurately forecast the severity of such an incident.

Power outages or power reductions can be expected throughout SMUD's service area. Downed power lines are a potential hazard and could complicate emergency response efforts. Substations and other portions of the infrastructure, especially the underground equipment, may be particularly susceptible to damage. Administrative facilities may be subject to damage. In addition, transmission facilities outside the service area may be damaged and limit the import capabilities, thus limiting the total amount of energy available for distribution and other operations. Generation facilities may experience interruptions or may be taken offline due to shaking or loss of load.

The immediate physical, emotional, and social impact on the population would be varied and complex. In the hardest hit areas, there could be deaths and many injuries. Many could have their homes destroyed, others driven from their homes by the lack of water and/or power, leaking gas, flooding and so on.

13.1 Earthquake

The United States Geological Survey (USGS) describes an earthquake as both the sudden slip on an active fault and the resulting shaking and radiated seismic energy caused by the slip. Liquefaction can be a secondary effect of seismic activity on specific types of soil. This could result in differential settlement, dam failures, landslides, tsunamis, and loss of critical infrastructure. Human life is also at high risk during an earthquake event. Earthquakes represent the most destructive source of hazards, risk, and vulnerability, in terms of both recent state history and the probability of future destruction of greater magnitudes than previously recorded.

13.1.1 Hazard Profile

Location

California is vulnerable to earthquakes because the state sits atop the boundary between two of the earth's tectonic plates, the Pacific Plate, and the North American Plate. These two plates are constantly moving at a relative rate of two inches per year. The primary boundary between these two plates is the San Andreas Fault, which is more than 650 miles long and extends to depths of at least 10 miles. Many other small faults such as the Hayward and Calaveras faults branch from and join the San Andreas Fault zone. According to the most recent information provided by the California Earthquake Authority, there is greater than a 99% chance that a magnitude 6.7 or greater earthquake capable of causing extensive damage and loss of life will occur in California within the next 30 years.³⁶ Moreover, minor earthquakes not associated with faults occur weekly.

Frequency and Severity

There are several faults known to exist within or near SMUD's Plan Area that could affect SMUD's energy system. In the eastern part of Sacramento County, the Bear Mountain and

³⁶ Source: "CEA." California Earthquake Authority, <https://www.earthquakeauthority.com/>.

Melones Faults are found. They are believed to have been inactive for the past 150 million years. The Bear Mountain Fault passes beneath the west end of Folsom Lake.

No faults are currently known to exist within the City of Sacramento portion of the County. It should be noted that significant earthquakes have occurred on previously undetected faults. Although no faults exist there, Sacramento does feel residue from ground shaking because of radiated seismic energy.

The threat of earthquake damage in SMUD's Plan Area comes from earthquakes along Northern California's major faults, which are the Green Valley, San Andreas, Calaveras, and Hayward faults. A major earthquake on any of these faults could cause shaking within the Plan Area to an intensity of V to VIII on the Modified Mercalli Intensity Scale, which means damage might be expected only in poorly built structures. Assets closer to the fault will experience stronger intensity than those further away.

SMUD's operations depend on infrastructure which is owned and/or operated within the regions of the Delta, Sierra Nevada and Greater Sacramento areas, Greater Bay Area, and the Shasta Cascade as defined by the California Earthquake Authority.

The Plan Area has a high risk of a major earthquake (7.0 magnitude or higher) occurring within 50km in the next 30 years, approximately 77%³⁷.

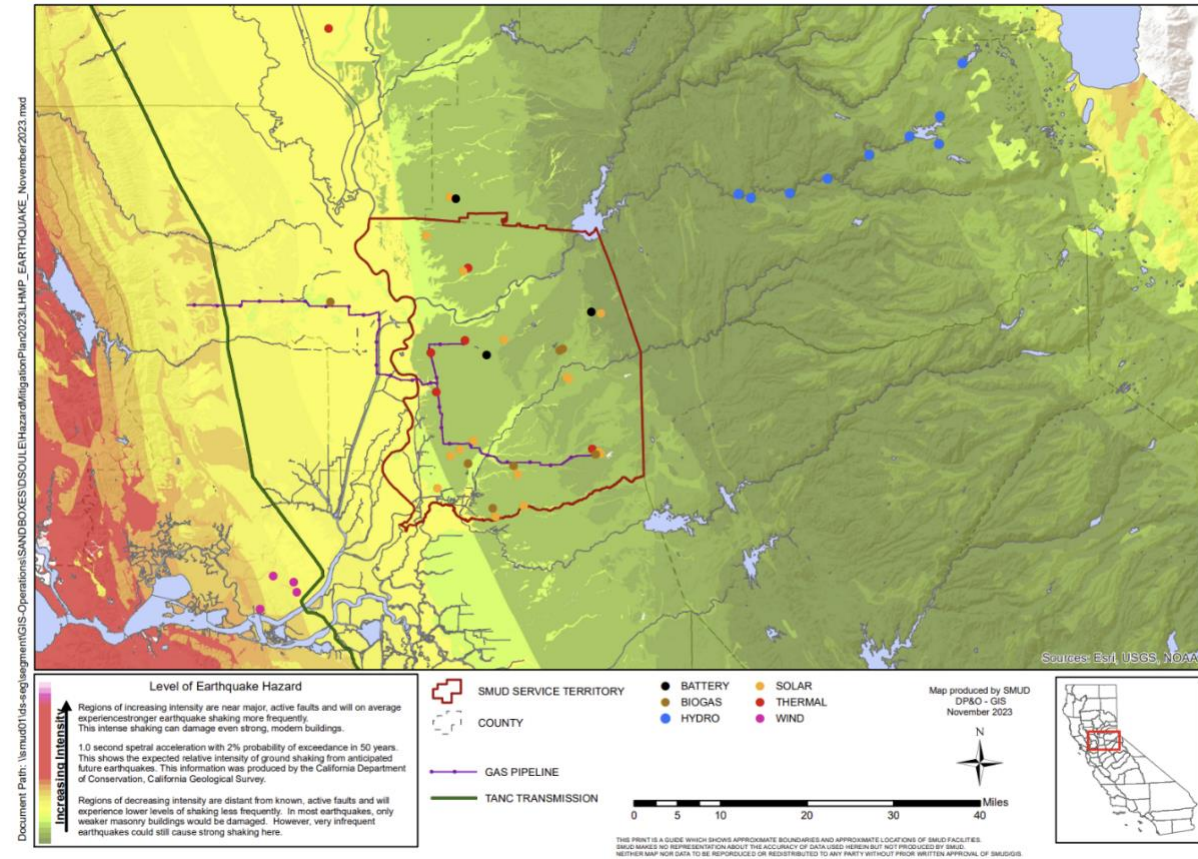
A major earthquake which impacts SMUD's Plan Area could cause a great many casualties, extensive property damage, fires, flooding, and other types of hazards. The effects of an earthquake could be aggravated by aftershocks and by the secondary effects of fire, landslides, and dam failure. The time of day and season of the year could potentially also have a profound impact on the number of fatalities and/or injuries and the amount of damage sustained. Such an earthquake could be catastrophic in its effect on the population and could exceed the response capability of the state and local communities. Damage control and disaster relief support would be required from other local governmental and private organizations, state and federal governments, and other utilities.

Extensive research and rescue operations may be required to assist trapped or injured persons. Emergency medical care, food, and temporary shelter would be required for injured or displaced persons. Following an earthquake, mass evacuation may be essential to save lives, particularly in areas below dams. Emergency operations could be seriously hampered by the loss of communications and damage to transportation routes within, and to and from, the disaster area(s) and by the disruption of public utilities and services. Figure 20 shows the relative intensity of ground shaking potential in SMUD's Plan Area from anticipated future earthquakes.

³⁷ Earthquake Authority, *Understanding the Earthquake Risk Where You Live*, <https://www.earthquakeauthority.com/California-Earthquake-Risk/Faults-By-County>, October 26, 2023.

Figure 20: Earthquake Shaking Hazards around SMUD Service Area

Earthquake Shaking Hazard Around SMUD Service Area



Past Events

The largest earthquake within 30 miles of Sacramento occurred in 1978 with a 4.4 magnitude. The largest earthquake within 30 miles of El Dorado County was a 2.9 in 1994. The largest earthquake within 30 miles of Yolo, CA was a 4.4 Magnitude in 1978.³⁸

Table 30 identifies the HMP counties located within the respective earthquake regions.

Table 30: Counties Located Within Corresponding Earthquake Regions	
Region	County
Delta, Sierra Nevada, and Greater Sacramento	<ul style="list-style-type: none"> • Colusa • El Dorado • Sacramento • San Joaquin • Sutter • Yolo

³⁸ California Earthquake Authority, <https://www.earthquakeauthority.com/California-Earthquake-Risk/Faults-By-County>, October 30, 2023.

Table 30: Counties Located Within Corresponding Earthquake Regions

Region	County
Greater Bay Area	<ul style="list-style-type: none"> Alameda Contra Costa Solano
Shasta Cascade	<ul style="list-style-type: none"> Glenn Modoc Shasta Siskiyou Tehama

13.2 Fault Rupture

A fault rupture occurs when one segment of the earth’s crust slides past another and a store of elastic energy is released as an earthquake. The resulting fracture is referred to as a fault. The sliding of the segments of earth on either side of the fault is referred to as the rupture. The fault rupture, aside from releasing an earthquake, can damage any structures or utility infrastructure around it, as the earth’s surface becomes displaced.

Frequency and Severity

No major, active faults traverse SMUD’s Plan Area. However, there is a multitude of subsurface faults in the Delta. Additionally, active faults do exist near SMUD’s Plan Area that could have a detrimental impact on SMUD’s infrastructure if a high intensity earthquake event were to take place (see Table 31). Table 32 shows the active faults by county.

Table 31: Active Faults in the Area Surrounding SMUD ³⁹

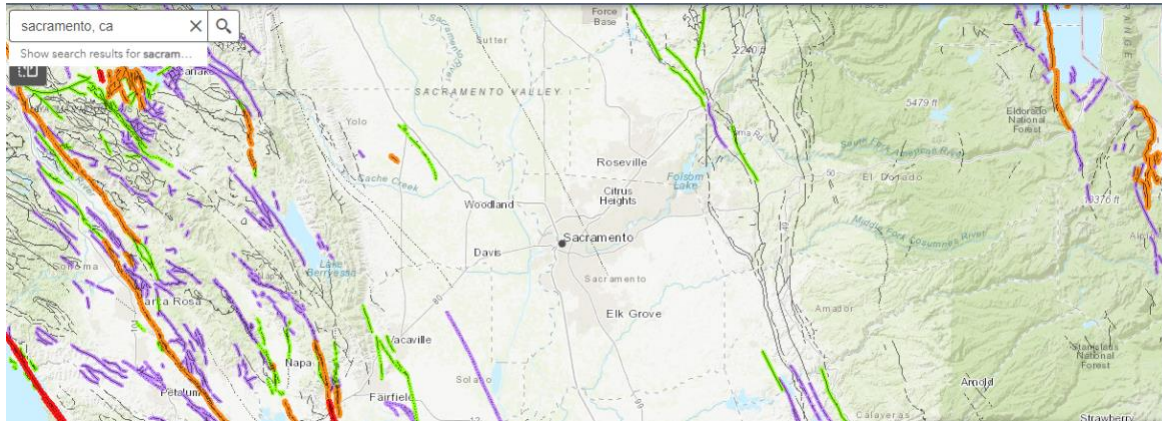
Fault Name	Approximate Distance from West Sacramento (miles)	Historical Seismicity	Probable Intensity
San Andreas	80	1906 (8.25)	7.5
Vaca	35	1892 (6.5-7)	6.0
Hayward	60	1836, 1868 (7.25)	6.5-7
Calaveras	50	1861 (6.5-7)	6.5-7
Concord-Green Valley	45	1955 (5.4)	6.0
Midland	20	1895	6.9
Dunnigan Hills	18	Unknown	6.0
Foothill Fault	25	1975	6.0

Table 32: Active Faults by County ⁴⁰			
County	Notable Faults	Proximity to a Major Fault (miles)	Additional Regional Risk
Alameda Contra Costa Santa Clara Solano	San Andreas Hayward	<10	Landslides Liquefaction
Colusa El Dorado San Joaquin Stanislaus Sutter Yolo	Cleveland Hills Sierra Nevada San Joaquin		Landslides Liquefaction Levee failure
Fresno	San Andreas Garlock San Joaquin		Landslides Liquefaction Levee failure
Glenn Modoc Shasta Siskiyou Tehama	Cleveland Hills Sierra Nevada	20	Landslides Liquefaction
Kern Kings Merced Placer Sacramento	San Andreas Garlock San Joaquin		Landslides Liquefaction Levee failure
San Benito	San Andreas San Gregorio	<15	Landslides Liquefaction
San Bernardino	San Andreas San Jacinto	<10	Landslides Liquefaction

Figure 21 shows a map of the Sacramento area with the surrounding fault lines nearby.

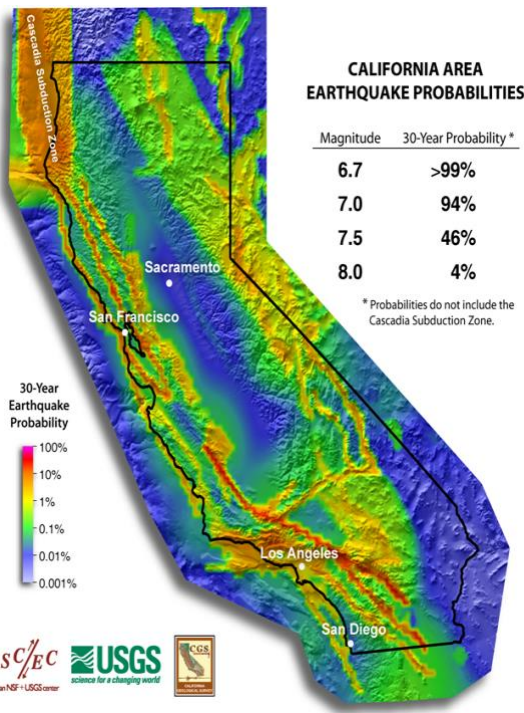
⁴⁰ California Earthquake Authority earthquakeauthority.com, October 9, 2023

Figure 21: Fault Activity Map Surrounding the Sacramento Region⁴¹



A fault rupture, causing an earthquake event, can lead to many detrimental residual hazards. Relative to the rest of the state of California, SMUD is at a low risk for the likelihood of a fault rupture and its residual effects (See Figure 22). Nonetheless, SMUD still has assets that remain vulnerable to shaking from fault ruptures among active faults in California and Nevada, as well as earthquakes not associated with fault rupture. Failure of these assets could lead to loss of both life and crucial infrastructure in SMUD’s Plan Area.

Figure 22: California Earthquake Probabilities⁴²



⁴¹ California Department of Conservation, *Fault Activity Map of California*, interactive map: <https://maps.conservation.ca.gov/cgs/fam/m>, October 26, 2023.

⁴²

13.3 Liquefaction

Liquefaction is one of the potential hazards that is a secondary effect of an earthquake. Liquefaction occurs when seismic ground shaking suddenly temporarily causes saturated soil to lose strength and firmness. Material that is normally solid begins to behave as a dense liquid. The effect is similar to a structure on quicksand. If the liquefied layer is on the subsurface, structures upon it will begin to move laterally.

Liquefaction is most likely to occur in areas where the groundwater level is shallow.

13.3.1 Hazard Profile

Location

Conditions such as liquefaction are most common in areas where alluvial soil is present. Alluvial soil is most prevalent in places where sandy sediments have been deposited by rivers, in moderate to large canyons, and areas in which wave action has deposited sediment along a beach. Bridges, wharves, piers, and underwater utility lines are most susceptible to the negative impacts of liquefaction.

In SMUD's Plan Area, the Delta and downtown Sacramento are at the greatest risk to liquefaction. Though SMUD's Plan Area has not endured any major earthquake events in recent history, there are at least five faults that lie near the Delta that can generate peak ground acceleration. The 1,100 miles of levees that surround the Delta may become unstable under seismic loading. The presence of sand and silt in the levees make liquefaction a very high possibility.

13.4 Subsidence

Subsidence is a sinking of the ground. More specifically, it is deemed as "movement in which there is no free side and surface material is displaced vertically downward with little or no horizontal component."

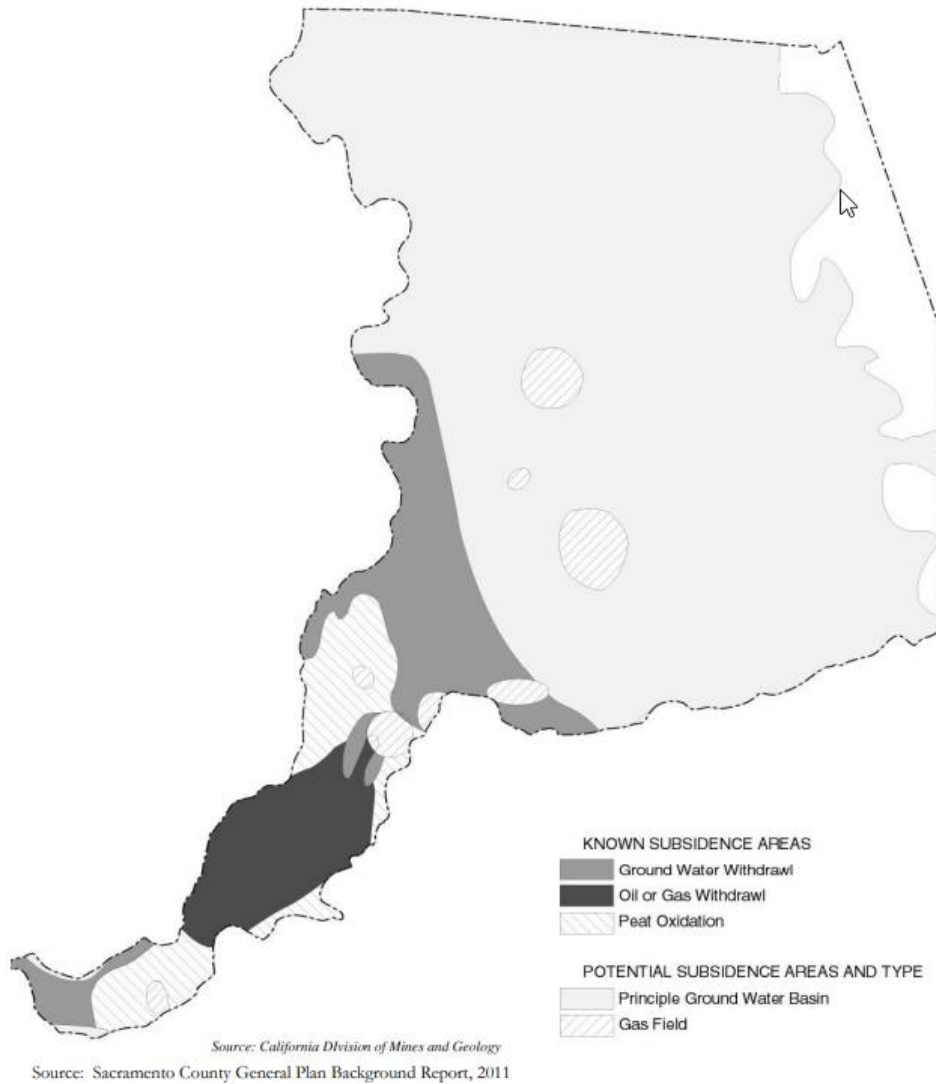
13.4.1 Hazard Profile

Location

SMUD's Plan Area is affected by some unique types of subsidence. The types of subsidence include:

- Earthquake-induced subsidence. This type of subsidence occurs when earthquake shaking causes the compaction of unconsolidated soils.
- Subsidence due to compaction by heavy structures. The Delta levees subside, in part, because of their own weight.
- Subsidence due to wind erosion of peat soils in the Delta.
- Subsidence due to fluid withdrawal. The removal of oil and gas in the Delta has caused some slight subsidence of soils in the Delta. Water withdrawal has been a much more important problem in Sacramento County.
- Subsidence due to peat oxidation in the Delta.

Figure 23: Known and Potential Subsidence Areas in Sacramento County⁴³



Frequency and Severity

Subsidence due to peat oxidation occurs in the Delta. Farmers drain the surface of the soil to plant and plow. When the peat dries out, aerobic bacteria can feed on the peat and convert it to carbon dioxide and other gaseous substances in a process called peat oxidation. Gradually, the peat is disappearing to the bacteria.

The subsidence in the Delta has caused problems for flood control because it places increasing pressure on the levees. These levees keep the surrounding water from inundating lower areas. The increasing hydrostatic pressure caused by the subsidence weakens the levees, necessitating periodic rebuilding. In terms of economic costs, subsidence makes flood protection increasingly expensive.

⁴³ Source: Sacramento County. 2021 Multi-jurisdictional Hazard Mitigation Plan Update – July 2021 Public Review Draft

Past Events

SMUD anticipates that within its Plan Area, if there continues to be drier climates, which removes water from the ground, making it dry, there will be increased risk of subsidence. To date, SMUD has not been impacted by subsidence.

There are no SMUD administrative facilities known to be in areas of existing, ongoing, or potential subsidence. Earth movement and sinking has developed at some substation sites. These conditions have been corrected.

13.5 Landslides

The Plan Area is susceptible to landslides. Landslide refers to a variety of slope instabilities that result in the downward and outward movement of slope-forming materials including rocks, soil, and artificial fill.

13.5.1 Hazard Profile

Location

Most landslides occur during rainy months when soil is saturated with water. Winter storms with intense rainfalls are the most common trigger for landslides. Masses of rock and soils can become detached from steep slopes or cliffs because of earthquakes, flooding, and/or drought and is strongly influenced by gravity, weathering, undercutting, or erosion. Rotational slides caused by the earth movements create a concaved upward movement of soil. This usually results in a bulging “toe” made of the slid material at the bottom of the slide. These types of land movement could cause significant damage to roads, leaving them unsafe to travel on.

Landslide impacts are geographically limited to the area where the slide occurs and are primarily associated with mountainous regions. The potential for larger slides in SMUD’s Plan Area exists in the UARP and other mountainous regions. The primary factors that could cause or increase the likelihood of landslides for SMUD are:

- Naturally occurring geological movement including rainfall, water action, seismic, and volcanic activities.
- Excavation and grading on sloping ground for homes, roads, and other structures.
- Drainage and groundwater alterations or breaches.
- Change or removal of vegetation located on steep slopes.

Frequency and Severity

Landslides can occur throughout the Plan Area, though more tend to occur in areas with steeper slopes, weaker geology, and high annual precipitation. Landslides may result from several things including natural and human-caused changes in the environment such as heavy rain, rapid snow melt, steepening of slopes due to construction or erosion, earthquakes, changes in groundwater levels and deforestation caused by wildfires. There have been incidents of landslides and general slope failure in isolated portions of El Dorado County, but it is an uncommon occurrence with no defined history of significant damages.

A more detailed landslide hazard assessment requires a site-specific analysis of the slope, soil, rock, vegetation, and groundwater characteristics. Such assessments are often conducted prior to major development projects in areas with moderate to high landslide potential, to evaluate the specific hazard at the development site. SMUD does not have sufficient information to determine the extent of landslides in its Plan Area. It has not been impacted by such an event.

13.6 Volcanoes

Volcanic eruptions are one of Earth's most dramatic and violent agents of change. Not only can powerful explosive eruptions drastically alter land and water for tens of kilometers around a volcano, but tiny liquid droplets of sulfuric acid erupted into the stratosphere can change our planet's climate temporarily.

13.6.1 Hazard Profile

Frequency and Severity

The principal hazards to people in the Pacific Northwest are from lahars and ash fall. Lahars (volcanic mudflows) can destroy buildings and infrastructure. Eruptions that include volcanic ash can be especially dangerous for aircraft, even at long distances from the volcano because volcanic ash can clog and shut down their engines. Explosive eruptions of volcanic particles are followed by effusion of lava flows. High-speed avalanches of hot rock and gas can accompany columns of tephra collapse or the fronts of lava flows crumble, both of which can send pyroclastic flows down the volcano's flanks. Finally, when the erupted material mixes with river water or melts snow and ice, volcanic mudflows sweep down valleys and can devastate areas more than 50 miles downstream. Rivers can continue to carry volcanic sediment downstream and force flooding for decades to hundreds of years. The most significant threats are from volcanic ash and from the slurry of mud and debris within lahars. Even in the absence of eruption, the flanks of Cascade volcanoes can collapse, which result in landslides and debris avalanches that can destroy areas downslope from the collapse location.

Volcanoes pose multiple types of hazards, and the initiation and duration of eruptions is relatively uncertain. Therefore, authorities and populations at risk, both close to and far from the volcano, must be knowledgeable about volcanic hazards so that they can be flexible and prepared in their response.

Eruptions often force people living near volcanoes to abandon their land and homes, sometimes forever. Those living farther away are likely to avoid complete destruction, but their cities and towns, crops, industrial plants, transportation systems, and electrical grids can still be damaged by tephra, ash, lahars, and flooding.

Fortunately, volcanoes exhibit precursory unrest that, when detected and analyzed in time, allows eruptions to be anticipated and communities at risk to be forewarned. The warning time preceding volcanic events typically allows sufficient time for affected communities to implement response plans and mitigation measures.

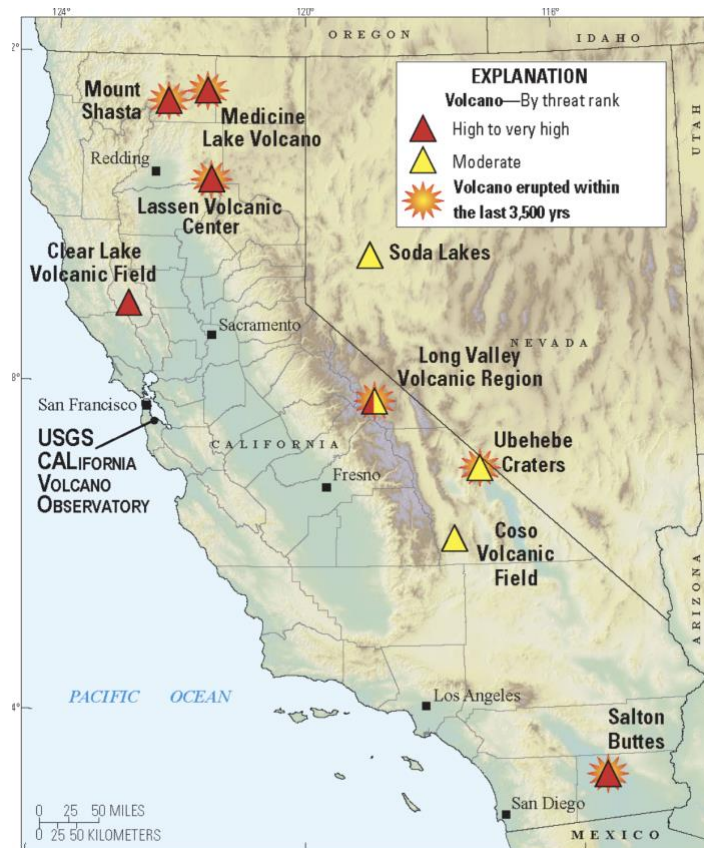
SMUD has not experienced a volcanic event, there is not sufficient data to describe the extent of potential damages.

Past Events

The plan region is home to several Cascade volcanoes and the Long Valley Caldera. The volcanoes, their locations, most recent activity, and threat potential are outlined in table 36. California’s active and hazardous volcanoes are portrayed in figure 33.

Volcano	County	Most Recent Eruption	Threat Potential
Long Valley Caldera	Mono	16,000-17,000 years ago	Very high
Mt. Shasta	Siskiyou	3200 years ago	Very high
Lassen Peak	Shasta	1914	Very high
Medicine Lake	Siskiyou & Modoc	950 years ago	High
Brushy Butte	Shasta	Holocene	Low to very low
Silver Lake Volcanic Field	Shasta	Holocene	Low to very low
Tumble Buttes	Shasta	Holocene	Low to very low
Twin Buttes	Shasta	Holocene	Low to very low

Figure 24: California Active and Hazard Volcanoes



⁴⁴ Source: Meyers and Driedger, 2008 <https://volcanoes.usgs.gov/observatories/calvo/>

Hazard response and coordination plans are multi-agency efforts that define the responsibilities and actions to take in the event of a restless or active volcano. Scientists from the five regional volcanic observatories of the USGS Volcano Hazards Program participate in developing these plans with state and local governments of at-risk areas. If volcanic unrest or an eruption occurs, scientists from the observatories will keep state and local officials informed of potential hazards so that coordination and response plans can be updated as needed.

13.7 Current Mitigation Efforts for Geological Hazards

SMUD’s mitigation efforts for earthquake and geological hazards events are uniform with the requirements of the State of California. A list of current mitigation activities is depicted in table 34 below.

Table 34: Current Geological Hazards Mitigation	
Mitigation	Description
Mapping	SMUD has identified all site-specific earthquake hazards and has created an identification map with operational emergency processes for the recognized seismic events that could occur, could trigger reinspection of certain assets as appropriate.
Adhering to codes	SMUD follows all current building codes and makes regular structural improvements to its facilities. Critical facilities are subject to more scrutinizing and innovative regulations and mitigation measures.
Vulnerability assessment	SMUD regularly assesses its water supply, oil, and natural gas pipelines for potential failure during an earthquake event. SMUD’s high hazard potential and significant hazard potential dams in the UARP are inspected annually with FERC and DSOD. All dams were found to not fail according to the guidelines.
EOC	SMUD maintains an EOC to help coordinate real-time incident command, response, and recovery from all emergencies, including those resulting from hazards.
Supplier joint-response agreement	Since much of SMUD’s critical assets and replacement parts are unique or made to order and the lead-time for manufacturing and delivery of these materials could take up to a year. It is important for the continued operation of the power grid to maintain the health and safety of our community, to participate in a supplier joint response coordination. The coordination allows SMUD to borrow from participating utilities and suppliers, key assets for immediate use.
Gap analysis	SMUD actively practices identification of gaps in current response plans for earthquake events and revises them regularly.
Proper equipment	SMUD utilizes flexible piping, flexible couplings, and above ground fault crossings.
Generators	SMUD utilizes generators in case of power failure.
Training for safe restoration	SMUD trains customers how to reset breakers to help restore electrical power.
Regional agency response coordination	Focus on active participation in city, county, and state emergency management structures for assuring coordinated responses to emergencies.

14.0 Severe Weather and Storms

Severe weather is a weather event that is beyond the range of commonly observed weather patterns in a geographic area. In the SMUD Plan Area, the usual events could include extreme heat, heavy rain, hail, lightning, and strong winds. The full possibility of weather events includes rainfall events, heat waves, storms, unusually cold temperatures, and wind events. California is projected to endure an increase in severe weather events due to climate change.

Severe weather can be viewed in four phases (see table 35) to communicate and coordinate with local agencies, mobilize necessary resources, and support local agencies in recovery efforts.

Table 35: Severe Weather Guidance⁴⁵

Phase	Category	Suggested Criteria	Critical Criteria
I	Seasonal readiness	On-set of summer and winter	Cooler months: Nov-Feb Warmer months: Jun-Aug
II	Increased readiness	Warmer or cooler than normal credible weather predictions	Potential for prolonged abnormal weather conditions and possibility of weather-related power outages.
III	Severe weather alert	Credible forecasts of excessively hot or cold weather conditions: daytime temps for a duration accompanied by specific nighttime temps	Heat: excessively hot weather for three days accompanied by night temps of 75°F or more. Cold: extreme cold/freeze warning or wind chill warnings indicating extreme weather conditions for three days accompanied by night temps of 32°F or less.
IV	Severe weather emergency	Extreme weather conditions that could potentially have a life-threatening impact on the population, animals, and agriculture	Heat: heat index of over 105°F with credible weather forecasts of excessively hot weather for more than three days accompanied by night temps of 75°F or more. Cold: extreme cold/freeze warnings or wind chill warnings indicating weather conditions that endanger human life with credible weather forecasts of extremely cold/freezing weather for more than three days accompanied by night temps of 32°F or less.

14.1 Extreme Heat

In the Plan Area, an extreme heat day is defined as a day between April and October in which the maximum temperature exceeds the historical 98th percentile of maximum temperatures for that given day. Cal-Adapt, a web-based climate adaptation planning tool developed by the California Energy Commission defines an extreme heat day, specific to SMUD’s plan region as one that exceeds 100°F. SMUD’s concern is the impact of extreme

⁴⁵ Source: *Sacramento Operational Area Severe Weather Guidance*
<http://www.sacramentoready.org/Documents/Sacramento%20Severe%20Weather%20Guidance.pdf>

heat of 100°F or more over multiple (>3) days. In these instances, it doesn't get cool enough at night to allow for the electric system equipment to cool down, which may cause potential operational disruption.

14.1.1 Hazard Profile

Location

In SMUD's Plan Area, Sacramento's foothill region is at the greatest threat to extreme heat events. The cooling breeze from the California Delta moves the heat from the urban core of the city into the foothills. SMUD has collaborated with the Capital Region Climate Readiness Collaborative to help identify additional areas suffering from such climate problems and create a long-term solution.

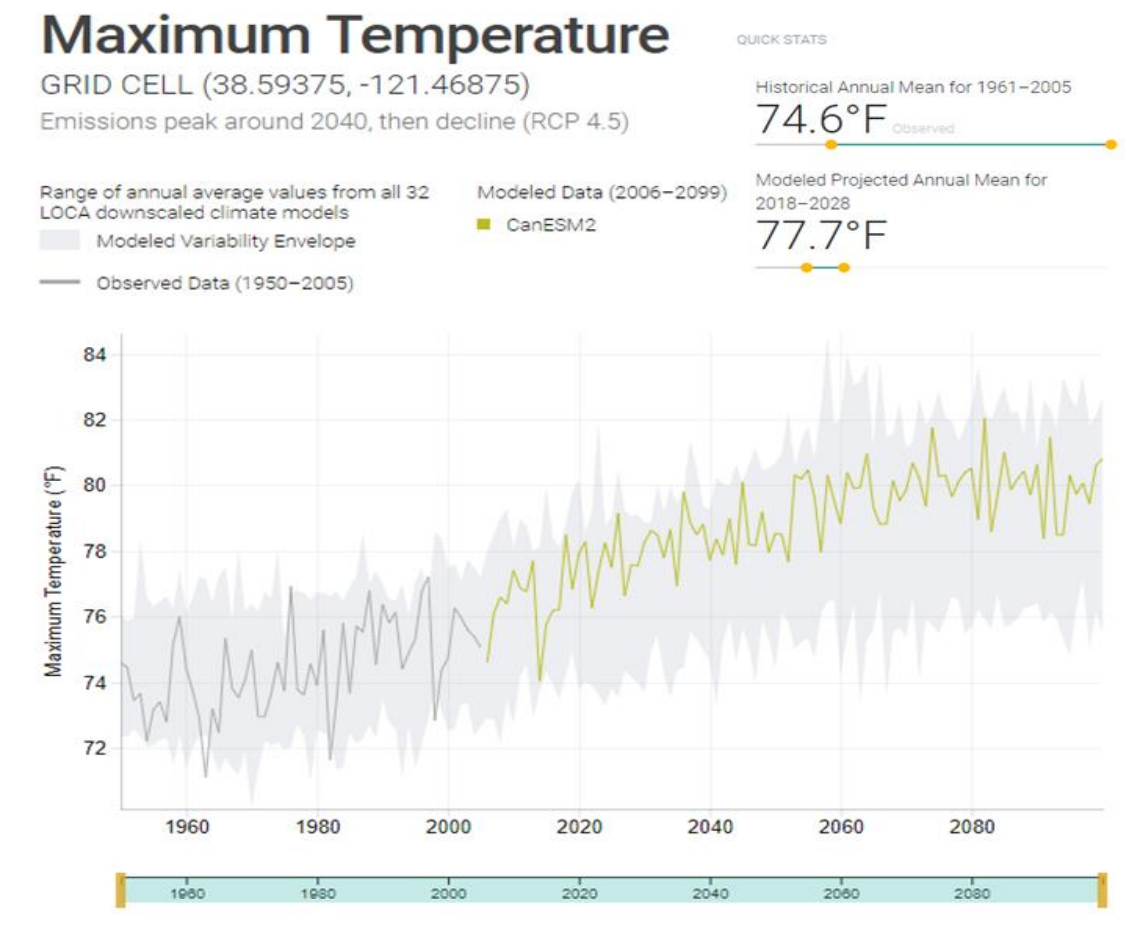
Date	Average Low	Average High	Record Low	Record High	Average Precipitation	Average Snow
January	41°	55°	19° (1888)	75° (1994)	4.18"	N/A
February	45°	62°	21° (1884)	80° (1985)	3.77"	N/A
March	47°	67°	29° (1880)	90° (1988)	3.15"	N/A
April	50°	74°	34° (1953)	98° (2004)	1.17"	N/A
May	54°	82°	26° (1896)	107° (1984)	0.6"	N/A
June	58°	89°	43° (1929)	112° (1934)	0.18"	N/A
July	61°	94°	47° (1901)	114° (1925)	0.05"	N/A
August	61°	93°	48° (1921)	112° (2020)	0.05"	N/A
September	59°	89°	44° (1934)	116° (2022)	0.37"	N/A
October	54°	79°	34° (1946)	102° (1966)	1"	N/A
November	46°	64°	27° (1880)	86° (1966)	2.59"	N/A
December	40°	55°	17° (1932)	72° (1979)	2.76"	N/A

Due to the impacts of climate change, it is projected that the annual mean temperature for Sacramento will increase by three degrees in the next ten years above the historical average (see figure 25).

⁴⁶ Source: Intellicast

<http://www.intellicast.com/Local/History.aspx?location=USCA0967>

Figure 25: Historical Annual Mean Temperature for Sacramento⁴⁷



Frequency and Severity

Extreme heat has always been a characteristic of the Sacramento region and the surrounding areas. However, extreme heat events are now projected to increase in regularity throughout the state of California because of climate change. The heat events are projected to be of a greater intensity, longer duration, and influence a broader geographic area. Average night-time temperatures, especially important for public health and infrastructure, are projected to increase even faster than daytime averages.

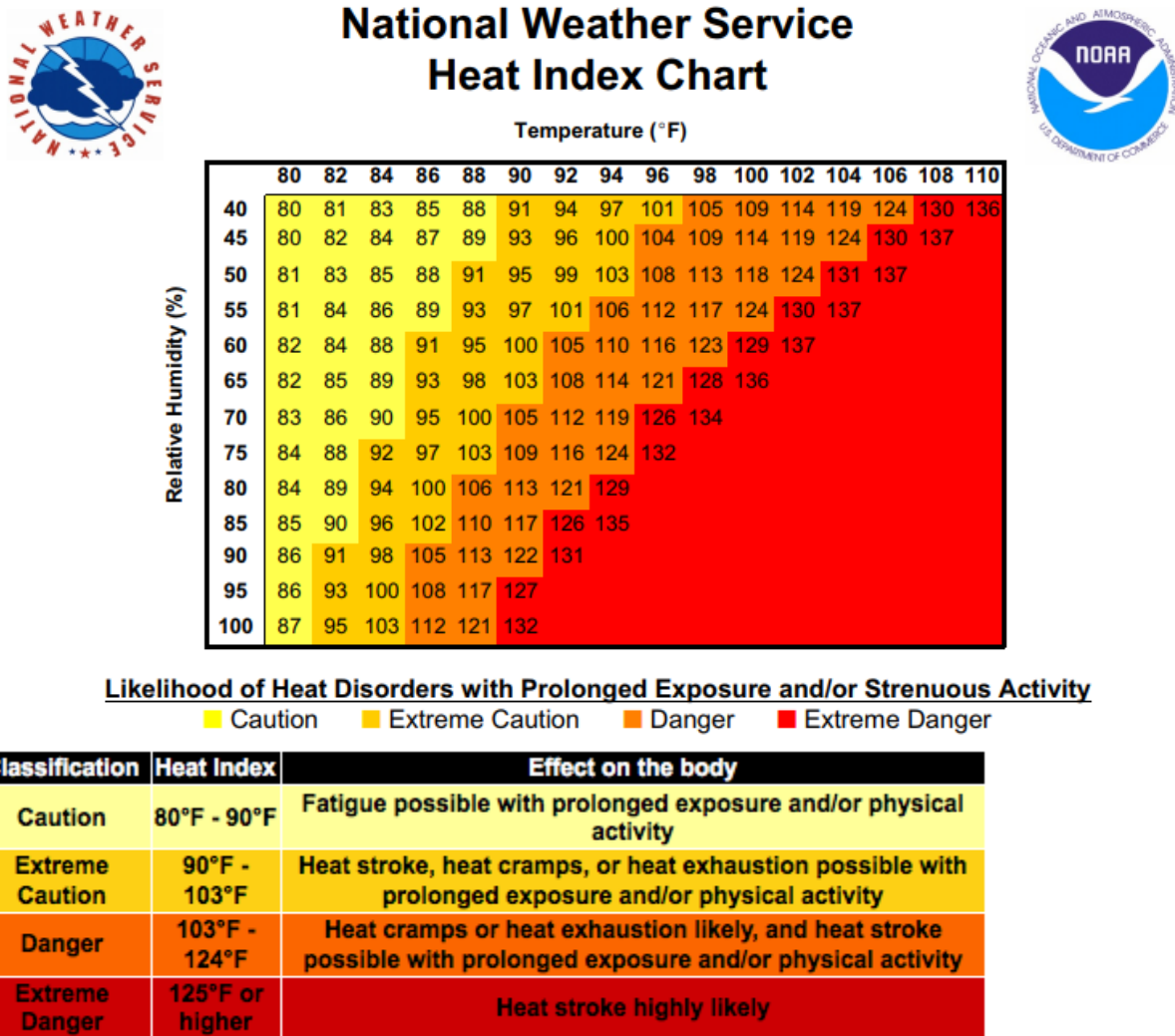
Extreme heat can also be accompanied by increased humidity. Extreme heat combined with increased humidity can pose a serious threat to human life and the longevity of infrastructure in SMUD’s Plan Area. A series of extreme heat days occurring consecutively is referred to as an extreme heat event. As climate change continues to affect SMUD’s Plan Area, heat events are becoming more prevalent.

The National Weather Service has implemented Impact-Based Decision Support Services (IDSS) which provides improved reporting of heat risk in the SMUD Plan Area. IDSS

⁴⁷ Source: *Cal-Adapt*

includes a seven-day forecast based on temperature and other factors and will rate the potential heat risk to the public. IDSS is well suited for the Sacramento Valley’s hot, dry climate. This system has the ability identify additional extreme heat events in the Plan Area.⁴⁸

Figure 26: Heat Index Chart and the Potential Effects of Heat on the Body⁴⁹



Extreme heat ranks as among the deadliest of all natural hazards. Humidity and extreme heat can provoke a quantity of natural hazards such as dust storms and drought. High temperatures usually coincide with low humidity. High temperatures generally contribute to the evaporation of surface water and moisture from the soil causing the soil to become loose and easier to be carried away by wind. As temperatures increase, it may overload demands for electricity to run air conditioners in homes and businesses.

⁴⁸ Source: National Weather Service

⁴⁹ Source: National Weather Service

Extreme heat tends to not affect infrastructure, as heat events are generally limited in length. Infrastructure gets relief between hot and cool temperature cycles. SMUD’s biggest points of vulnerability are, given an extreme heat event, an overload demand for electricity to run air conditioners in homes and businesses and the safety of its employees in the field.

Extreme heat is harmful to the population and employees in SMUD’s Plan Area. In California, heat-related events annually send 4,300 people to the emergency room and hospitalize an additional 600 for stays longer than one day. In 2006, during one of California’s worst heatwaves, 203 deaths were attributed to heat-related events.⁵⁰

The populations that are most vulnerable to heat-related events include the homeless, infants and children under age five, the elderly, individuals with disabilities, individual’s dependent on medical equipment, and individuals with impaired mobility.

Past Events

The Plan Area temperatures could range from moderate to extremely high heat. The warmest times of the year are typically the late summer and early fall. The Plan Area has suffered occasional heat events. The sudden spike in temperature has great impact to residents inside and outside the Plan Area and could affect the electric grid. Table 37 depicts available data found for the most recent excess heat events in the NCDC database for the Plan Area.

Table 37: Recent Excessive Heat Events in SMUD Plan Area⁵¹

County/Zone	Date	Death	Injuries
Central Sacramento Valley	06/17/2017	2	2
Southern Sacramento Valley	06/18/2017	6	0
Southern Sacramento Valley	06/22/2018	0	0
Southern Sacramento Valley	07/24/2018	0	0
Southern Sacramento Valley	08/14/2020	3	0
Southern Sacramento Valley	05/31/2020	0	0
Southern Sacramento Valley	09/07/2021	0	0
Southern Sacramento Valley	06/10/2022	0	0
Southern Sacramento Valley	09/04/2022	1	1

14.2 Freeze

Extreme cold and freeze is most likely to occur during the winter months, and often accompanies a winter storm. Sustained freezes can cause life loss and health risks to vulnerable populations. Economically, freezes can severely affect agriculture in SMUD’s Plan Area, which affects farmers, farm workers, packers, and shippers of agricultural products. Freezes can also cause significant increases in food prices to the consumer due to shortages.

⁵⁰ Source: NRDC <https://www.nrdc.org/climate-change-and-health-extreme-heat#/map/detail/CA>

⁵¹ Source: NCDC (www.ncdc.noaa.gov) 13 December 2017

The NCDC has recorded 22 freeze incidents in SMUD’s Plan Area since 1993, resulting in \$200,000 in property damage and \$5MM in crop damage⁵². In 2013, a six-day freeze event caused more than \$440MM in damage to citrus crops throughout the state. Freezes are likely to become less frequent in California as climate change increases average temperatures.

Exposure and Vulnerability

Exposure to extreme cold and freeze may be life threatening since it can cause frostbite or hypothermia. The populations most susceptible to the dangers of freeze are infants and the elderly. Regarding infrastructure, pipes may freeze and burst in homes or businesses that have poor insulation, ice can also form on power lines which could weigh powerlines down, stressing and damaging it. In the most extreme of conditions, freezes can impair communication facilities in SMUD’s Plan Area. If freeze is intermixed with warm weather cycles, it may result in an increase in avalanche risk.

Freezing temperatures are usually coupled with high winds and snow which could cause trees to fall into power lines, leading to damage to the infrastructure, impacting electrical reliability.

14.3 Fog

Fog is formed when ice crystals and/or water droplets collect, suspended in the air at the earth’s surface. This occurs when the air is cooled to the point that it can no longer contain all the water vapor it has accumulated. In Sacramento, fog season occurs in the late fall and winter. Fog typically forms in the early morning hours, and it can and will last several days at a time.

Table 38: Fog Events in Sacramento County⁵³

Date	Deaths	Injuries	Property Damage	Crop Damage
12/11/1997	5	26	\$1.5MM	\$0
12/18/1998	1	10	\$500,000	\$0
12/20/1999	0	2	\$120,000	\$0
01/3/2001	0	0	\$0	\$0
12/8/2015	0	0	\$0	\$0
11/4/2020	0	0	\$0	\$0
01/16/2022	0	0	\$0	\$0
Total	6	38	\$2.1MM	\$0

⁵² Source: NCDC

⁵³ Source: NCDC

It is currently unclear if climate change will have a future effect on fog in the Sacramento area. However, decreasing emissions in the air in response to climate change has resulted in a decline in winter fog events over recent decades.⁵⁴

Fog in the Sacramento area can reduce visibility to mere feet. This can lead to multi-car accidents and have devastating effects on transportation corridors. Severe fog can close roads, cause accidents, and impair the effectiveness of emergency responders. Electric infrastructure along roadways is at risk of accident-related damage. In addition, SMUD’s employees are required to drive heavy equipment to conduct work. Increased fog increases risks for drivers and electric workers by limiting visibility. Considering that most of SMUD’s Plan Area sits within a valley, it is at risk for dense fog. There is not enough data to determine specific potential extent of fog in SMUD’s Plan Area.

14.4 Severe Storms, Hail and Lightning

A thunderstorm is considered severe when it either contains three-quarters of an in-sized hail or winds more than 57.5 miles per hour (mph) - this includes tornadoes. Severe storm events are most prominent during the fall, winter, and spring. Sacramento County averages 18.14 in. of rainfall per year⁵⁵.

Hail is created when water droplets are carried upwards, above the freezing level. The droplets freeze, becoming too heavy for the updraft to carry, and fall to the ground. Hail is usually less than two in. in diameter, but it can fall at speeds of 120 mph.

Lightning is a visible electrical discharge caused by a thunderstorm. Lightning can strike as far as five to ten miles from the storm, in areas authorities may not consider to be a direct threat.

Table 39: Severe Weather Events in Sacramento County Since 1950⁵⁶

Event Type	Number of Events	Deaths	Injuries	Property Damage	Crop Damage
Hail	9	0	0	\$111,030	\$0
Heavy rain	28	0	1	\$365,000	\$50,000
Lightning	1	0	0	\$150,000	\$0

Exposure and Vulnerability

Severe storms can cause flooding as well as drainage issues in the Sacramento area. Severe storms also put many assets at risk, as flooding combined with strong winds can result in the failure of very mature trees and other geological hazards.

Hailstorms can destroy roofs, buildings, automobiles, vegetation, and SMUD assets.

⁵⁴ Baldocchi and Waller, 2014. <https://doi.org/10.1002/2014GL060018>

⁵⁵ <https://fox40.com/news/local-news/sacramento/what-are-sacramentos-rainiest-months-and-what-is-the-citys-average-annual-rainfall/#:~:text=According%20to%20NOAA's%20data%2C%20which,March%20and%20ending%20in%20April.>

⁵⁶ Source: *Sacramento County Hazard Mitigation Plan*

Lightning can kill or injure employees and people in SMUD's Plan Area. Assets and infrastructure can also be struck directly. These strikes could result in a burn, explosion, or destruction. Lightning can also lead to wildfire if it strikes the surface in a dry region with vegetation high in fuel.

14.5 High Winds and Tornadoes

The National Weather Service (NWS) defines high winds as sustained wind speeds of 40 mph or greater lasting for one hour or longer, or winds of 58 mph or greater for any duration.

High winds can lead to funnel clouds and tornadoes during severe storms. Damages from tornadoes are a result of high wind velocity and wind-blown debris accompanied by lightning or large hail. Each year, an average of 800 tornadoes occurs nationwide, resulting in an average of 80 deaths and 1,500 injuries.⁵⁷

14.5.1 Hazard Profile

Wind speeds during a tornado can reach 300 mph. Unlike hurricanes, which can also produce such wind speeds over great geographic areas, tornadoes are confined to much smaller areas over short distances. SMUD's Plan Area is at a low risk for tornadoes, relative to the rest of the United States. When tornadoes have occurred historically, they have done so at low intensity on the Fujita Tornado Scale⁵⁸. However, if a tornado were to affect the area, it would most likely be in the late fall or early spring.

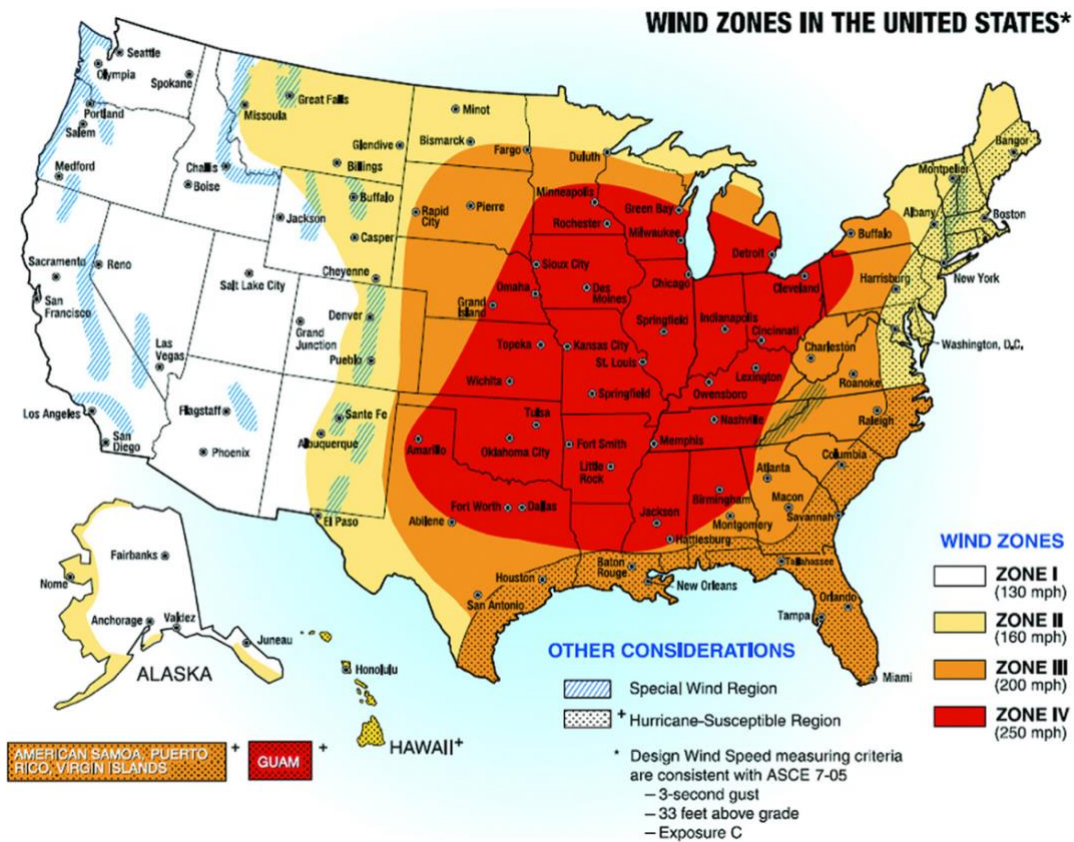
Exposure and Vulnerability

SMUD's Plan Area is at a low risk of hazardous levels of high winds, relative to other areas of the country (see figure 27). However, high winds are a seasonal occurrence that will continue to occur annually in the Plan Area.

⁵⁷ National Oceanographic and Atmospheric Administration, 2002

⁵⁸ Official measure in which tornado intensity is classified

Figure 27: Wind Zones in the United States⁵⁹



Past Events

Fallen trees from high winds in SMUD’s Plan Area can damage buildings as well as critical structures, including electrical overhead lines, leading to secondary impacts from fire and power outage as well as serious injury to staff or the public and potential death. The most recent high wind and storm events occurred from late December 2022 to January 2023 causing fallen trees and power outages in SMUD service territory. A selection of recorded high wind events can be found in table 40 below.

⁵⁹ Source: FEMA

Table 40: Recent Extreme Wind Hazards in SMUD Plan Area⁶⁰

County/Zone	Date	Type	Magnitude
Motherlode Camptonville	12/09/1996	Winter storm	40
Northeast Foothills Sacramento	12/09/1996	Winter storm	40
Carquinez Strait and Delta	12/09/1996	Winter storm	45
Northern Sacramento Valley	12/09/1996	Winter storm	45
Northern San Joaquin Valley	12/09/1996	Winter storm	45
West Slope Northern Sierra	12/09/1996	Winter storm	
Fulton	09/14/2008	High wind	55 kts. EG
San Joaquin Valley	06/04/2012	Dust storm	
Central Sacramento Valley	12/29/2014	Strong wind	25 kts. MG
Northeast Foothills Sacramento	12/30/2014	High wind	52 kts. EG
Northeast Foothills Sacramento	12/30/2014	High wind	52 kts. EG
Northeast Foothills Sacramento	12/30/2014	High wind	57 kts. MG
Northern Sacramento Valley	12/30/2014	Strong wind	38 kts. MG
Motherlode Camptonville	12/30/2014	Strong wind	43 kts. EG
Southern Sacramento Valley	12/30/2014	Strong wind	35 kts. EG
Southern Sacramento Valley	12/30/2014	Strong wind	40 kts. MG
Northern Sacramento Valley	12/31/2014	High wind	50 kts. EG
Southern Sacramento Valley	01/07/2019	High wind	43 kts. MG
Southern Sacramento Valley	01/18/2021	High wind	49 kts. MG
Carquinez Strait and Delta	10/10/2021	High wind	46 kts. MG

⁶⁰ Source: *NCDC*

Table 40: Recent Extreme Wind Hazards in SMUD Plan Area⁶⁰

County/Zone	Date	Type	Magnitude
Southern Sacramento Valley	10/10/2021	High wind	43 kts. MG
Southern Sacramento Valley	12/13/2021	High wind	49 kts. MG
Sacramento Valley	12/18/2022-01/15/2023	High wind	52 kts. EG
Tehama County	01/14/2023	Thunderstorm wind	48 kts. EG

(Strong winds ≥ 25 kts., high winds ≥ 35 kts.)

High winds, particularly those accompanying severe storms, can result in significant property and crop damage. Most hazardous to SMUD’s Plan Area, high winds can exacerbate existing weather conditions, and increase the speed at which wildfire travels. Through the damage of roofs and structures, or residual damage caused by fire, winds can have a serious impact on the functional operation of SMUD assets.

High winds can result in power loss and business closures. Winds can also affect fog, dust, and snowstorms. Wind events have caused greater than \$14MM in damage in SMUD’s Plan Area since 1955 (see table 41).

Table 41: Wind Events in Sacramento County Since 1993⁶¹

Event Type	Number of Events	Deaths	Injuries	Property Damage	Crop Damage
High wind	40	1	0	\$9MM	\$39,000
Strong wind	26	0	2	\$3.7MM	\$0
Thunderstorm wind	9	0	0	\$50,000	\$0
Tornado	13	0	0	\$1.5MM	\$0
Total	88	2	2	\$14.2MM	\$39,000

Tornadoes have similar damaging potential to that of high winds. A tornado is likely to damage buildings, cause trees to fall, damage power lines, break gas lines, break sewer and water mains, and cause fires. Access to hazard recovery might also become impaired due to a tornado, as roads can be destroyed or blocked by debris.

While there are incidents of tornadoes in SMUD’s Plan Area, it poses a relatively low risk for most of the area compared to states located in the Midwest and South of the nation. The Plan Area is subject to strong winds associated with powerful winter cold fronts. Strong winds because of tornadoes could have an impact to reliability, could cause increased risk of fires and cause damages to SMUD infrastructure. Table 42 below depicts the recorded tornadoes for the Plan Area and the extent of damage as defined by the F-Scale.

⁶¹ Source: *Sacramento County Hazard Mitigation Plan*

Table 42: Record Tornadoes 1925 to Present⁶²

Year	County Impacted	Total Events	Extent F-Scale
1972	El Dorado	1	0
1978	Sacramento	1	2
1983	Sacramento	1	1
1988	Sacramento	1	1
1989	Solano	1	0
1995	Sacramento	1	0
1998	Sacramento, Solano	1, 1	0, 0
2005	Sacramento, Solano, Sutter, Yolo	4, 1, 2, 2	0, 0, 0, 0
2007	Sacramento	1	0
2011	Sacramento, Solano, Sutter	1, 1, 1	0, 0, 0
2012	Sacramento, Sutter	1, 1	0, 1
2015	Sacramento	1	1
2020	El Dorado, Sacramento	1, 1	0, 0

14.6 Current Mitigation Efforts

SMUD mitigates extreme heat by protecting its outdoor workers. SMUD provides adequate water, shade, rest breaks, training, and emergency procedure to ensure the safety of its employees. Employees are constantly evaluated for signs and symptoms of heat illness, especially in temperatures greater than 95°F. SMUD also has load flexibility and demand response programs in place to address peak load during extreme heat events and the increased use of air conditioning.

SMUD mitigates freeze with warning systems and demand response programs to handle peak load during an increase in the use of electric heating systems.

SMUD mitigates high wind events through wind engineering design and construction of its assets, according to state, federal, and industry standards. To prevent fall in of trees to electrical lines, SMUD’s vegetation management program seeks to proactively identify trees as risk of fall in for removal. In terms of storms and fog related accident risk, SMUD power lines are marked and inspected for visibility and integrity. SMUD employees are trained to...

To mitigate severe weather and storm events, SMUD crews assist in maintaining clear channels, canals, and creeks by removing weeds and debris that can halt water flow during severe weather incidents. SMUD holds drills to rehearse floodgate closures to ensure a rapid response during an emergency.

⁶² Source: *The Tornado Project* (www.tornadoproject.com), NOAA national climate data center, 13 December 2017

Table 43: Current Severe Weather Hazards Mitigation

Mitigation	Description
Adhering to code	SMUD follows all current building codes and makes regular structural improvements to its facilities. Critical facilities are subject to more scrutinizing and innovative regulations and mitigation measures.
Equipment built to industry standards and standard practice at time of build	Equipment built to applicable standards e.g. structural codes such as IEEE and ASCE7.
Resource priority map	Used to identify the most at-risk people to deploy regional resources to these communities quickly.
EOC	SMUD maintains an EOC to help coordinate real-time incident command, response, and recovery from all emergencies, including those resulting from hazards.
Supplier joint-response agreement	Since much of SMUD’s critical assets and replacement parts are unique or made to order and the lead-time for manufacturing and delivery of these materials could take up to a year. It is important for the continued operation of the power grid to maintain the health and safety of our community, to participate in a supplier joint response coordination. The coordination allows SMUD to borrow from participating utilities and suppliers, key assets for immediate use.
Generators	SMUD utilizes generators in case of power failure.
Instruction	SMUD trains customers how to manually shutoff utilities.
Protecting staff	SMUD’s People Service and Strategy Team oversees the Cares Program. During a hazard event, the team will conduct outreach to impacted employee’s supervisors to determine employee needs and acts as a liaison to get the needed resources to those employees impacted.
Roadway projects	Identify areas of vulnerability for roadway impact from severe weather and prioritize for mitigation from current and future hazard events.
Access to equipment	Contracted with roadway and helicopter vendors so that areas impacted by severe weather hazards are accessible.

14.7 Tree Mortality

Tree mortality refers to the death of trees due to factors such as drought-induced water stress, insect attacks, and high tree density.

14.7.1 Hazard Profile

Frequency and Severity

Increased tree mortality elevates fuel loads, creates hazardous conditions for firefighting personnel, decreases production rates of fire line construction, poses risk of injury and damage from falling branches, and financially impacts property owners. From 2010-2022, 208.6 million trees have died in California. This frequency is expected to increase due to continued climate change. A growth in the rate of tree mortality can affect local, regional, and global carbon budgets⁶³. Table 44 below depicts the estimated number of trees that have died each year since 2010.

Past Events

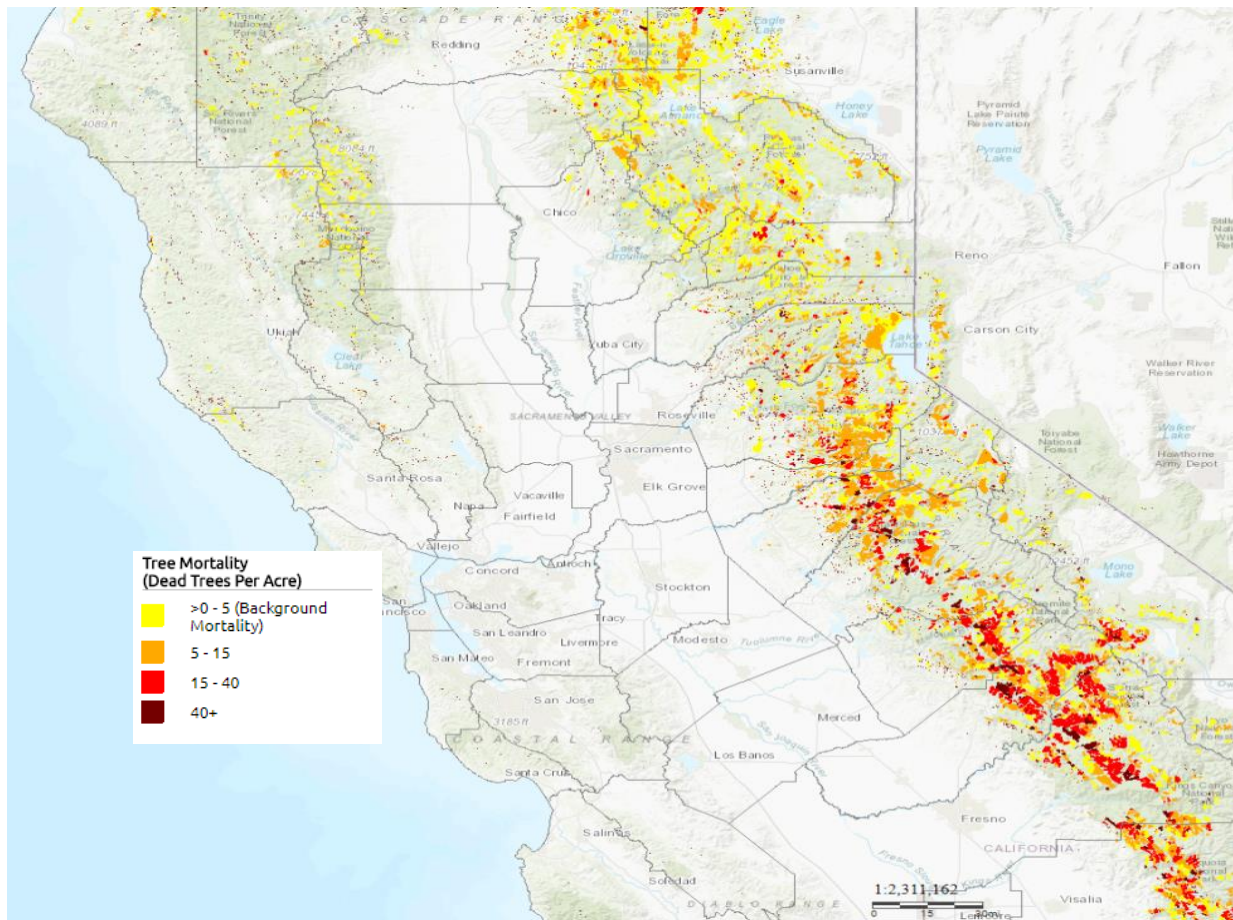
Table 44: Estimated Cumulative Number of Dead Trees in California ⁶⁴	
Year	Estimated Number of Dead Trees
2010	3.1 million
2011	1.6 million
2012	1.8 million
2013	1.3 million
2014	3.2 million
2015	29 million
2016	62 million
2017	27 million
2018	18.6 million
2019	15.1 million
2021	9.6 million
2022	36.3 million
Total	208.6 million

*2020 no data surveyed due to pandemic. Years after 2020 may not be as accurate.

⁶³ Living trees take in carbon dioxide while dead trees release carbon dioxide.

⁶⁴ Source: CalFire

Figure 28: 2017 Aerial Detection of Tree Mortality in Northern California
65



14.7.2 Exposure and Vulnerability

Increased wildfire risk associated with tree mortality has resulted in a major reorganization of the forest's ecosystem. SMUD's Plan Area is expected to see a decline in forest productivity, a change in species composition, a shift to smaller sized trees, and a reduction in forest extent in some regions. There is no data to show how many trees in SMUD's Plan Area are dead and/or dying. SMUD does not record the number of trees that it removes as a result of tree mortality. Its vegetation management program removes trees under and adjacent to transmission and distribution lines to increase safety, reliability, and decrease wildfire risks.

⁶⁵ Source: *Department of Forestry and Fire Protection*

14.7.3 Current Mitigation Efforts

Table 45 depicts the current mitigation efforts for tree mortality.

Table 45: Current Tree Mortality Hazards Mitigation	
Mitigation	Description
CalFire partnership with California Natural Resource Agency, US Forest Service, Caltrans, and California Energy Commission (CEC)	Use the dead trees as biomass energy.
Private and public agency coordination	SMUD coordinates and collaborates with private and public entities to identify projects that are mutually beneficial and to improve forest health.
Vegetation management program	SMUD prunes most trees on a fixed interval, and faster growing trees on a more frequent interval. SMUD identifies dead and dying trees, as a part of its vegetation management program, for removal.
Aerial patrols	Performing annual traditional aerial patrols to identify trees in states of decline.
Remote sensing technology	SMUD uses remote sensing technology to determine tree health using lidar and imagery.

15.0 Energy Shortage

15.1 Background

15.1.1 Hazard Profile

Delivery of electricity service in SMUD’s Plan Area has been consistently and highly reliable for most of the century-long development, expansion, and continuous operation of grids across all regions of the Nation. The traditional definition of reliability—based on the frequency, duration, and extent of power outages—may be insufficient to ensure system integrity and available electric power in the face of climate change, natural hazards, physical attacks, cyber threats, and other intentional or accidental damage; the security of the system, particularly cybersecurity, is a growing concern.

Resilience is the ability to prepare for and adapt to changing conditions, as well as the ability to withstand and recover rapidly from disruptions, whether deliberate, accidental, or naturally occurring.⁶⁶ While resilience is related to aspects of both reliability and security, it incorporates a dynamic response capability to reduce the magnitude and duration of energy service disruptions under stressful conditions. Infrastructure planning and investment strategies that account for resilience typically broaden the range of risk-

66

<https://www.energy.gov/sites/prod/files/2017/01/f34/Chapter%20IV%20Ensuring%20Electricity%20System%20Reliability%2C%20Security%2C%20and%20Resilience.pdf>

reduction options and improve national flexibility through activities both pre- and post-disruption, while also focusing on the electricity-delivery outcomes for the consumer.

15.1.2 Exposure and Vulnerability

Changes in the climate are expected to bring more frequent and extreme weather conditions. Extreme weather conditions have the potential to decrease the efficiency of thermal power plants and substations, decrease the capacity of transmission lines, render hydropower less reliable, spur an increase in electricity demand, and put energy infrastructure at risk of flooding and fire. Similarly, during cold spells, heating demands increase, further stressing the energy infrastructure.

The Sacramento area faced historic storms from New Year’s Eve to the early weeks of January 2023, with severe rain, 70-mph winds, and lightning, leading to significant damage and unprecedented power outages. Over 599,000 customers experienced power outages during that period. Additionally, there were 300+ power poles that fell, 1,800 wires down, and 650 downed and broken trees.

15.1.3 Current Mitigation Efforts

SMUD considers several natural hazards during the planning, construction and maintenance stages of its equipment and infrastructure. This may result in new equipment standards, environmental reviews, and risk assessments to help reduce the impacts of the natural hazards of new or existing infrastructure locations. SMUD periodically reviews and revises its projections of long-term energy demand against State requirements as a part of plan for expansion of electric power generation, transmission, and distribution facilities.

Table 46: Current Energy Shortage Hazards Mitigation

Mitigation	Description
Wholesale energy risk management guidelines and directives	Provides guidance and limits on energy requirements.
Resource adequacy requirement	Resource adequacy requirements ensure SMUD is able to meet the peak planned demand for a period.
California Public Utility Commission (CPUC) requirement	The CPUC requires that investor-owned utilities it regulates purchase 15 percent over their forecasted load. SMUD procures resources such that its resources available exceed forecasted demand by at least a 17.5% margin on a monthly basis.
Capacity/Energy Shortage Contingency Plan	Plan outlines additional steps and notifications in the event traders are unable to purchase sufficient energy or resources.

16.0 Climate Change

16.1 Background

The National Aeronautics and Space Administration (NASA) defines climate change as the change in the usual weather conditions and patterns found in a region. More specifically, it is a change in the average weather conditions such as temperature, rainfall, snow, ocean, and atmospheric circulation, or in the distribution of weather around the globe. According to NASA, scientists think that the Earth's temperature will keep increasing for the next 100 years. "This would cause more snow and ice to melt. Oceans would rise higher. Some places would get hotter. Other places might have colder winters with more snow. Some places might get more rain. Other places might get less rain." ⁶⁷

California has already been experiencing the impacts of climate change including prolonged droughts, increased coastal flooding and erosion and tree mortality. The state has also seen increased average temperatures, more extreme heat days, fewer cold nights, a lengthening of the growing season, shifts in the water cycle with less winter precipitation falling as snow and both snowmelt and rainwater running off sooner in the year. In addition to changes in average temperatures, sea level and precipitation patterns, the intensity of extreme weather events is also changing. More frequent extreme weather events and resulting hazards, such as heat waves, wildfires, droughts, and floods are expected. ⁶⁸

16.1.1 Hazard Profile

Climate change has not been identified as being directly responsible for any declared disaster. However, recent studies indicate that past flooding, wildfire, levee failure, drought, and severe weather damages, have been exacerbated by climate change⁶⁹. Climate change is an ongoing hazard that can increase the intensity of the likelihood, velocity and/or impacts of all hazards. The impacts because of climate change generally are long-term effects and are projected to be realized and compounded over several decades, depending on the extent of greenhouse gas mitigation.

Climate change impacts many hazards, and a secondary impact could be land subsidence due to changing geology in the soil. The impacts of land subsidence include damage to buildings and infrastructure such as electrical equipment, substations, etc. Land subsidence in California is attributed to two primary factors, aquifer compaction due to excessive groundwater pumping and decomposition of wetland soils exposed to air after wetland conversion to farmland. According to the US Geological Survey, there have been recorded incidents of land subsidence in the Sacramento-San Joaquin Delta area and in addition to the Sacramento Valley. The Sacramento Valley has suffered elevation losses ranging from 0.73 ft. to 3.9 ft. since 1949.

In SMUD's Plan Area, the impacts of climate change will result in frequent and intense storms, floods, droughts, and heat waves. Potential consequences of these weather-related

⁶⁷ Source: <https://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what-is-climate-change-k4.html>

⁶⁸ California's Fourth Climate Change Assessment, January 16, 2019. <http://www.climateassessment.ca.gov/state/>

⁶⁹ USGS

hazards include the loss of life and injury, damaged infrastructure, long-term health effects, loss of agricultural crops, disrupted transport, and freight, and much more.

From an operations perspective, climate change means rising energy demand and falling generation and distribution efficiency for the energy sector. Higher ambient temperatures will increase energy demand during the peak summer months by driving use of air conditioning.⁷⁰ Rising temperatures will also decrease the efficiency of thermal conversions, meaning that more resources will be required to produce the same amount of energy. In addition to higher temperatures, climate change may bring increased frequency and severity of major weather events, which pose a threat to infrastructure. Changing weather patterns may also affect solar-, wind-, and hydropower generation.⁷¹

SMUD is an industry leader in innovation and progress in California’s effort to reduce greenhouse gases and prepare for climate changes. In 2012, SMUD produced its first targeted climate readiness study and adaptation strategy. The review included a “state of the science” assessment to update scientific findings and incorporate lessons from the California Climate Adaptation Strategy, Adaptation Policy Guide, and numerous other resources. The climate readiness study and adaptation strategy are an integrated plan for addressing climate change. The analysis gives SMUD an opportunity to critically assess climate change risks and strategy and improve its readiness efforts, while providing a venue for sharing and learning best practices, providing transparency to the community, and building on local efforts with other public and private organizations. The study was updated in 2016 to include a Readiness Action Plan that addresses community engagement, enterprise programs, capital projects, and operational initiatives. In 2021, SMUD took a step further by releasing its 2030 Zero Carbon Plan. The plan details the goal of eliminating carbon emissions from power generation by 2030. SMUD has many programs supporting the equitable transformation to clean energy, including building and transportation electrification incentives, electric vehicle test drives, and partnerships to develop new technologies and strengthen the renewable energy grid.

16.1.2 Current Mitigation Efforts

Table 47 below captures SMUD’s existing activities to mitigate climate change risks.

Mitigation	Description
Department of Energy (DOE) partnership	SMUD continues to partner with the DOE to share information.
Long-term planning	Staff incorporates climate projection scenarios and readiness findings into long-term planning processes at SMUD.

⁷⁰ Increased temperatures may also reduce energy demand during winter months, but the reader should note temperature changes in the summer are expected to be larger on a nominal basis than changes in the winter.

⁷¹ University of Cambridge. 2014. Climate Change: Implications for the Energy Sector. Available at: https://www.bmz.de/en/publications/type_of_publication/weitere_materialien/Implications_for_Energy_Briefing_WEB_EN.pdf

Table 47: Current Climate Change Hazards Mitigation

Mitigation	Description
Capital Region Climate Readiness Collaborative	SMUD chairs and participates in the regional adaptation collaborative to leverage existing regional resources to address the impacts of climate change.
Support research	SMUD supports, when appropriate, and helps to fund new research to fill significant gaps in current knowledge about climate change.
Climate Readiness Assessment and Action Plan	Staff reviews and summarizes new scientific conclusions and incorporates them into SMUD’s Readiness Strategy every four years as new methodologies warrant.
Zero Carbon Initiative	The 2030 Zero Carbon Plan is a flexible road map to achieve zero carbon by 2030 while ensuring all customers and communities we serve reap the benefits of decarbonization.

SMUD’s forward-looking mitigation strategies include:

- Leveraging the best available climate science to make decisions, updating the “state of the science” assessment every four years.
- Continuing to collaborate with multiple local agencies on flood data analysis and preparedness planning.
- Taking proactive measures to make SMUD more resilient.
- Conducting research into the impacts of sustainable forest management techniques on wildfire risk reduction and stream flows.
- Identifying systematic opportunities to integrate climate change projections in internal program planning and capital budget development and approval.
- Investigating opportunities to employ resiliency bonds to finance further readiness measures.
- Supporting and participating in the Capital Region Climate Readiness Collaborative to assist public and private partners in the region improve overall climate readiness.
- Continuing implementation of the 2030 Zero Carbon Plan

17.0 Threat and Social Disturbance Hazards

Threat and disturbance address a symptom of and a form of protest against unfavored decisions. The severity of these actions coincides with the level of public outrage; it could range from blocking or impeding access to a building and disrupting normal activities by generating noise and intimidating people to a full-scale riot that destroys property and terrorizes individuals.

17.1 Terrorism

The Code of Federal Regulations (C.F.R.) defines terrorism as “the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives (28 C.F.R. Section 0.85). Terrorism refers to human-caused hazards and their use of weapons of mass destruction: biological, chemical, nuclear, and radiological weapons, arson, incendiary, explosive and armed attacks, or any devices or vehicles that can be used to cause destruction and/or casualties. Terrorism also includes industrial sabotage, intentional hazardous materials releases, and cyber terrorism. Terrorists have a desired objective to target large public gatherings, water and food supplies, utilities and corporate centers, and communication capabilities.

The three key elements to defining a terrorist event are as follows:

- Activities involve the use of illegal force,
- Actions are intended to intimidate or coerce, and
- Actions are committed in support of political or social objectives.

17.1.1 Hazard Profile

The following (see Table 48) are potential methods used by terrorists that could directly or indirectly impact SMUD’s Plan Area:

Active Shooter	Arson
Explosive detonation	Biological agent release
Chemical agent release	Cyber terrorism
Kidnapping/Hostage-Taking	Nuclear Detonation
Radiological incident	Vehicle Ramming Attack

Frequency and Severity

SMUD owns critical infrastructures as defined by the Department of Homeland Security. These critical infrastructures are more vulnerable to terrorist attacks. Since September 11, 2001, the number of threats involving the use of chemical, nuclear, or biological agents by individuals and terrorist groups wishing to instill fear and disrupt communities within the United States has escalated. However, to date, SMUD has not experienced a known high-profile attack by groups or individuals associated with international terrorist organizations. Nor has SMUD experienced an incident involving a biological, chemical, radiological, or nuclear weapon. Nevertheless, domestic terrorist incidents such as the December 3, 2022, Moore County NC Substation Ballistic Attack have led to heightened security efforts for the Plan Area.

An explosive or electromagnetic pulse detonation occurring anywhere in California could have a critical impact on SMUD’s energy system and/or its ability to maintain continuity in electric service. A targeted attack on SMUD could result in catastrophic damages to its

electric system as well as its staff, customers, and the community. Damages could include casualties, extensive property damage, fires, flooding, and other ensuing hazards. Such a detonation could be catastrophic in effect on the electrical system and could exceed SMUD’s response capability. Emergency operations may be seriously hampered by the loss of communications and damage to transportation routes within the disaster area as well as the disruption of other public utilities and services. Extensive mutual aid and State/Federal assistance could be required and could continue for an extended period.

Damage to SMUD’s power plants and ancillary facilities in affected areas can be expected to reduce generating capacity significantly. The potential impact of this reduction in local output is lessened by the availability of power from other sources outside the affected area and by relational reduction in consumer demand. Immediate concerns will focus on repairs necessary to restore power to areas of greatest need. Major restoration problems include supplying chain disruptions, repairs necessary to route power through the major substations, restoration of damaged and collapsed transmission line towers, re-activation of equipment at local substations, replacement of fallen poles, burned transformers, etc. The following table depicts SMUD’s current mitigation efforts of terrorism hazards.

17.1.2 Current Mitigation Efforts

Table 49: Current Terrorism Hazard Mitigation	
Mitigation	Description
24/7 security patrols	Compensatory checks and alarm responses occur 24/7. SMUD staffing includes a 24/7 security force responsible for monitoring all closed-circuit television systems, responding to security alarms, and performing security inspections, investigations, etc.
Remote location monitoring	SMUD can monitor remotely through Security Operations Centers (SOC) staffed by SMUD Security Operations personnel as well as contract services.
External collaboration	SMUD participates with local, state, and federal agencies for terrorism monitoring and notification.
Physical access management	Fencing, sensors, cameras, and alarms with operational procedures and technology applications that remotely monitor facilities and protect critical assets and resources.
Emergency Operations Plan	SMUD maintains an emergency operations plan which addresses SMUD’s preparedness and response policies and procedures for responding to, and recovering from, extraordinary emergency situations that could adversely affect business continuity and the capacity to safely generate, transmit, and distribute electric power to its customers.
Nuclear Response Plan	SMUD maintains an emergency plan that outlines the requirements for SMUD’s response to a nuclear release event. The plan is reviewed and tested multiple times annually.

Table 49: Current Terrorism Hazard Mitigation

Mitigation	Description
Emergency Action Plan	Plan that outlines emergency actions to take during hazard event.
Agency coordination and information sharing	SMUD periodically participates with various agencies to learn about and share cyber threat information.
Exercises	Conduct periodic exercises to find opportunities to improve existing processes.

17.2 Cyber Threats

Cyber threats are attempts by criminals to attack a government, organization, or private party by damaging or disrupting a computer or computer network, or by gaining unauthorized access to information on a computer or computer network for malicious use.

17.2.1 Hazard Profile

Exposure and Vulnerability

Cyber based attacks gain access to or intrude on critical infrastructure systems, such as financial services, communications systems, energy, or transportation systems, with the potential to alter their reliable functioning. Disruption to such SMUD’s systems could pose a critical threat to local and national security. Over the past years, the threat from cyber terror has grown exponentially in part due to the rapid growth in the use of the Internet and the rapid growth of technology in general.

SMUD collects employee, customer, and vendor information on a continuous basis (e.g., job applications, new customer applications, loan forms) for business operations. As SMUD’s electric grid and computer systems become more and more interconnected, and with the increased adoption of new technology (including cloud computing, big data, and mobile device usage), the risk for cyber breach increases.

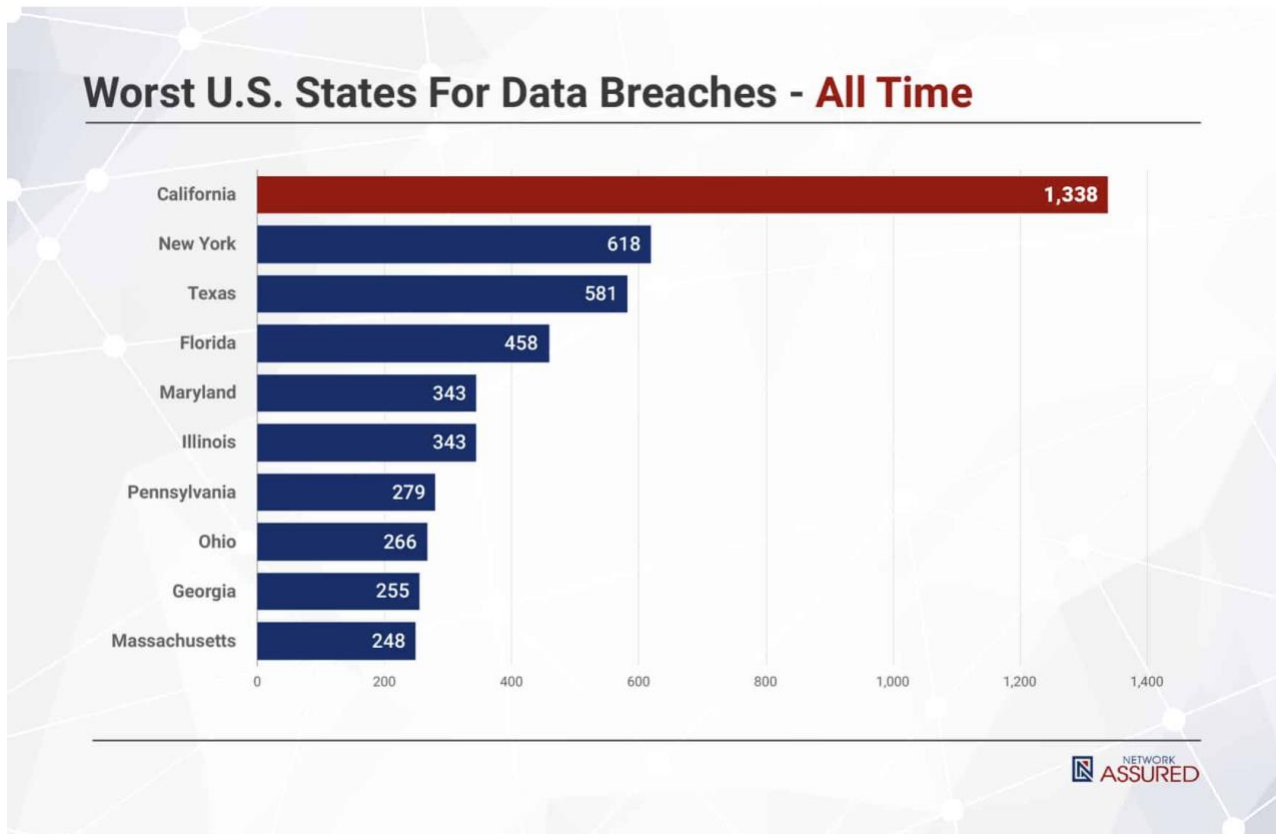
Past Events

According to Statista, in 2022, there were 1,802 cases of data compromises in the United States where 422 million individuals were affected in the same year by data compromises, including data breaches, leakage, and exposure.⁷² California was the top of the US states according to the CMS OCR breach list for 2022, experiencing 1,338 breaches.⁷³ (See Figure 29.) As technology begins to advance and become more prominent, users are increasingly more vulnerable to cyber threats.

⁷² Statista, *Annual number of data compromises and individuals impacted in the United States from 2005 to 2022*, August 29, 2023, <https://www.statista.com/statistics/273550/data-breaches-recorded-in-the-united-states-by-number-of-breaches-and-records-exposed/> October 16, 2023.

⁷³ Network Assured, *The 10 Worst States in the U.S. for Data Breaches [Data Study]*, February 20, 2023, <https://networkassured.com/security/worst-us-states-for-data-breaches/#:~:text=According%20to%20the%20California%20Attorney,in%20healthcare%20and%20human%20services.>

Figure 29: Worst U.S. States for Data Breaches - All Time



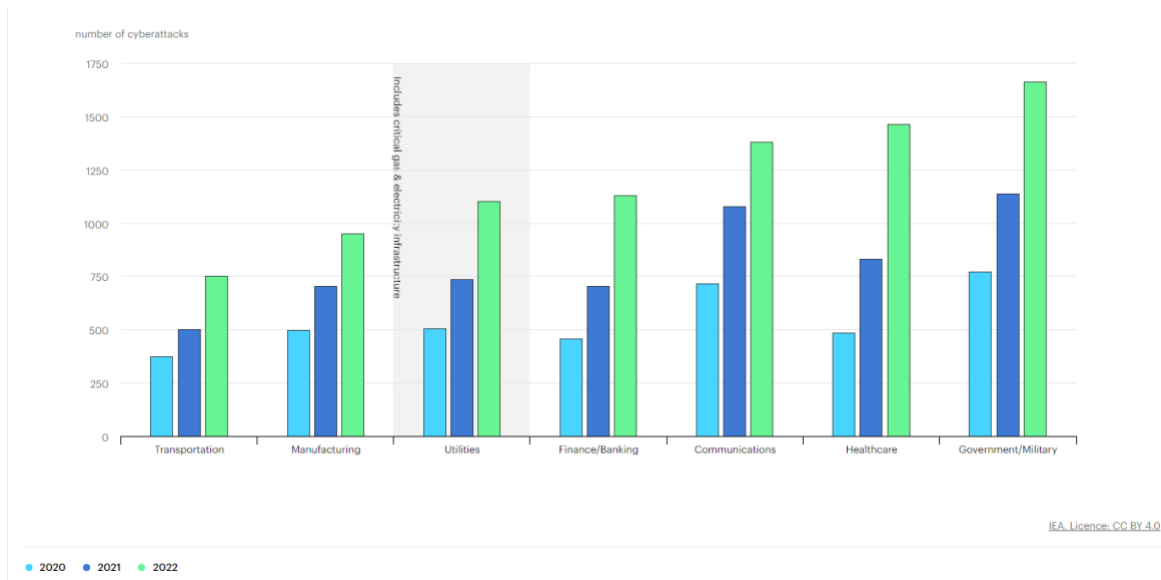
2022 started with Russia’s war of aggression on Ukraine which in addition to human toll, threatened order and put many organizations at risk of spillover cyberattacks. At the same time, China state-nexus adversaries increased their cyber espionage campaigns, and Iranian actors launched destructive “lock and leak” operations using ransomware.⁷⁴

Cyberattacks are on the increase in the electricity sector. Cyberattacks on utilities have been growing rapidly since 2018, reaching alarmingly high levels in 2022 following Russia’s invasion of Ukraine. More recent attacks in the electricity sector have disabled remote controls for wind farms, disrupted prepaid meters due to unavailable IT systems, and led to recurrent data breaches involving client personally identifiable information. In 2022, the cost of data breach was 4.72 million in the energy sector.⁷⁵ Figure 30 below shows the average number of weekly cyberattacks by industry for the period 2020-2022.

⁷⁴ Crowd Strike, 2023 Global Threat Report, <https://go.crowdstrike.com/rs/281-OBQ-266/images/CrowdStrike2023GlobalThreatReport.pdf>, October 10, 2023

⁷⁵ Cybersecurity – is the power system lagging behind?, <https://www.iea.org/commentaries/cybersecurity-is-the-power-system-lagging-behind>, October 10, 2023.

Figure 30: Average Number of Weekly Cyberattacks by Industry for 2020-2022⁷⁶



In May 2021 a ransomware attack on a major petroleum product pipeline’s IT network resulted in major prescriptive measures directing U.S. government agencies to take a series of proactive steps to bolster cybersecurity. The International Energy Authority (IEA) is an international energy forum, its responsibilities include tracking and analyzing global key energy trends, promoting sound energy policy, and fostering multinational energy technology cooperation. It states in one of its articles that there is little public information available on significant cybersecurity incidents due to under-reporting and the lack of detection. That being said, there is evidence that cyberattacks on utilities have been growing rapidly since 2018, reaching alarmingly high levels in 2022 following Russia’s invasion of Ukraine. They anticipate that this trend will only continue.⁷⁷

17.2.2 Current Mitigation Efforts

SMUD participates in several cross-collaborative cyber threat prevention initiatives (see Table 50).

Mitigation	Description
Mandatory training	SMUD requires completion of the training on cyber security policies, physical access controls, electronic access controls, visitor control program, handling of BCS information and storage, identification of a cyber security incident.
Cybersecurity Incident Response Planning	SMUD maintains a robust Cybersecurity Incident Response Plan that defines the response actions to be taken when a

⁷⁶ Cybersecurity – is the power system lagging behind?, <https://www.iea.org/commentaries/cybersecurity-is-the-power-system-lagging-behind>, October 10, 2023.

⁷⁷ International Energy Agency (IEA), Cybersecurity – is the power system lagging behind?, August 2023.

Table 50: Current Cyber Threat Hazards Mitigation

Mitigation	Description
	Cybersecurity Incident occurs. The plan includes several phases and defines various teams to respond to incidents whenever they occur. SMUD exercises its response plan at least twice per year.
Identity access management	Periodic verification of user accounts, user groups, or user role categories and that privileges assigned are correct. Implementation of user account to leased privileged, restricting user accounts to what is needed to do their job.
Privileged Access Management Program (PAM) Project	Installation of hardware and software that prevents people from knowing the passwords to generic or shared accounts. Administrator accounts are managed by the system to prevent users from knowing password.
Physical security plan	Log entry of individuals with authorized physical access to SMUD campus, monitor unauthorized access through physical access points.
System security management	Evaluate security patches, protect against the use of unnecessary physical input/output ports, generate alerts for security events. SMUD has implemented the Cyber Critical Infrastructure Controls required by NERC Standards and the Cyber Security Controls required by the FERC Division of Dam Safety and Inspection standard.
Exercises and testing	Conduct periodic exercises and testing to continuously improve the Cybersecurity Incident Response Plan.

17.3 Physical Threats

Physical security is the protection of personnel, facilities, information, equipment, operations and activities from physical actions and events that could cause serious loss or damage to an enterprise, agency, or institution. This includes protection from fire, flood, natural disasters, burglary, theft, vandalism, and terrorism.⁷⁸

17.3.1 Hazard Profile

Asset Profile and Security Personnel

SMUD has assets spread over a wide geographical area that differ in criticality, type, and vulnerability. The largest set of assets vulnerable to physical attack are our 300+ substations, which vary in size and protection levels applied to mitigate risk or comply with regulatory requirements. SMUD also maintains a turbine farm in the East San Francisco Bay area covering approximately 5000+ acres. There are two large campus-type environments housing the majority of SMUD’s workforce personnel and operational assets. SMUD also has a smaller campus east of the Sacramento area that houses both personnel and equipment that operate and maintain SMUD’s hydropower assets, consisting of several complexes of dams, powerhouses, and switchyards. The approximate total service territory is 900+ square

⁷⁸ https://www.techtarget.com/searchsecurity/definition/physical-security?Offer=abt_pubpro_AI-Insider

miles and approximate total asset footprint (not counting gas pipeline) of 3000 square miles. This vast area is serviced by a full-time internal security force.

Current and Past Incidents

SMUD has experienced a wide range of physical security incidents over the past 5 years. SMUD facilities have been subject to unauthorized intrusions, ballistic attack, theft, burglary, vandalism, and other various petty crimes.

17.3.2 Vulnerability Assessment

SMUD is a publicly owned electric utility that owns and operates infrastructure that delivers reliable power to the public and is part of the U.S. Bulk Electric System. Like many utilities, SMUD’s infrastructure, if not underground is above ground or overhead and is generally visible to the public. As such, it makes it an easy target for bad actors to exploit.

SMUD maintains processes and documents to protect the physical security of its properties.

SMUD has established policies to ensure the implementation of its security program that seek to prevent, manage, and mitigate risk of physical incidents. (See Table 51.) This is done by establishing and executing procedures to control access, and to deter, delay, detect, assess, respond to, and investigate incidents.

17.3.3 Current Mitigation Efforts

Mitigation	Description
Physical Security Program	SMUD has program documentation which establishes policies, procedures, controls, and guidelines to achieve the security program objectives. The program is reviewed and supported by the Executive team.
Access to SMUD properties	SMUD has developed policies, processes, and procedures to ensure the safety of SMUD Workforce Personnel and the public. The policies, processes, and procedures outline the controls and restrictions to all SMUD Properties, and restricts access based on need as determined by Security Operations.
Employee training, awareness, and behavior	SMUD Workforce Personnel with CIP access receives annual training. SMUD Workforce Personnel and Visitors are required to adhere to all access control policies and procedures. SMUD Workforce Personnel and Visitors should remain aware of others in their vicinity and report any concerns or suspicious activity to Security Operations.
First responder response	During events requiring first responders to respond, SMUD Security Operations will coordinate, facilitate, escort, and assist first responders by following established procedures (i.e., CIP Exceptional Circumstances). During any such

⁷⁹ SMUD Physical Security Administrative Policy 2012

Table 51: Current Physical Hazards Mitigation⁷⁹

Mitigation	Description
Security assessment and implementation	SMUD continues to assess the security and criticality of its assets and recommends implementation of certain physical security mitigations as appropriate. These mitigations may include additional security cameras, barriers, or intrusion detection systems to name a few.
24/7 security patrols	Compensatory checks and alarm responses occur 24/7. SMUD staffing includes a 24/7 security force responsible for monitoring all closed-circuit television systems, responding to security alarms, and performing security inspections, investigations, etc.
Remote location monitoring	SMUD can monitor assets remotely through Security Operations Centers (SOC) staffed by SMUD as well as contract services.
Physical access management	Fencing, sensors, cameras, and alarms with carefully designed operational procedures and technology applications that remotely monitor facilities and protect critical computerized information resources.

18.0 Other Hazards

18.1 Air Pollution

Air pollution is defined as the air containing any substance that poses harmful or poisonous effects. Air pollution is hazardous to the health of many citizens residing in SMUD’s Plan Area. Sources of air pollution are grouped into four major categories: stationary, mobile, area-wide and natural sources.

18.1.1 Hazard Profile

Stationary sources of air pollution include small and large fixed facilities such as power plants, dry cleaners, gasoline stations, and landfills. Mobile sources of pollution include cars, trucks, ships, and airplanes. Area-wide sources of pollution may result from agriculture, consumer products, construction grading or unpaved roads. Natural sources include plant pollens, biological decay, windblown dust, and wildfires. The pollutants from these sources and activities are typically broken up into three major pollutant categories: Criteria (affecting people’s respiratory health and/or leading to the creation of ground level Ozone and particulate matter), hazardous (known or suspected to cause cancer and/or other serious health effects), and greenhouse gas (contributing to global warming and climate change).

The American Lung Association’s 24th annual air report, *The State of Air*, utilized the most recent criteria air pollution data from the U.S. Environmental Protection Agency and ranked California the most polluted state to live in. The report also ranked the Sacramento-

Roseville region among the 10-topmost polluted cities in the United States.⁸⁰ Although air pollution has declined in the past years due to decades of progress on cleaning up sources of air pollution, it continues to be a concern as more than 1 in 3 American live in places with unhealthy levels of air pollution.⁸¹ Table 52 shows the average quantities of emissions in tons per day since 1995. SMUD supports the State’s initiatives by reducing air pollutants as detailed in the 2030 Zero Carbon Plan.

Table 52: Statewide Criteria Air Pollutant Emissions (tons/day, annual average)⁸²

Pollutants	Actual Emissions						Projected Emissions					
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Nitric Oxide (NO _x)	4,319	3,844	3,220	2,741	2,359	2,199	1,1632	1,1457	1,0997	1,0477	992.6	964.4
Reactive Organic Gas/Volatile Organic Compound (ROG/VOC)	3,761	3,128	2,430	2,167	2,046	2,004	1,4709	1,4653	1,4691	1,4690	15383	15909
Particulate Matters 10 micrometers (PM ₁₀)	2,200	2,267	2,212	2,254	2,326	2,410	1,4821	1,5134	1,5215	1,5419	15667	15939
Particulate Matters 25 micrometers (PM ₂₅)	862	877	864	879	903	933	370.8	374.9	376.8	381.1	386.6	393.1
Carbon Monoxide (CO)	22.8K	17.5K	13.8K	11.4K	9.8K	8.8K	5,1395	5,1242	5,1541	5,2444	53352	54572

As a part of its general monitoring process, SMUD leverages a number of different publicly available resources to monitor and forecast air quality within its service territory as well as areas where SMUD employees work. Figures 31 and 32 below are sample maps and data showing in real time, the air quality in the Sacramento area. This data helps air quality agencies forecast and report the “Air Quality Index” (AQI) to the public based on the prevalent pollutants of an applicable weather season. AirNow defines the AQI “as a yardstick that runs from 0 to 500. The higher the AQI value, the greater the level of air pollution and the greater the health concern. For example, an AQI value of 50 or below represents good air quality, while an AQI value over 300 represents hazardous air quality.” In the summer, the AQI provides ambient levels of ozone and/or particulate, while in the fall and winter seasons, these monitors identify days with high particulate levels. As described

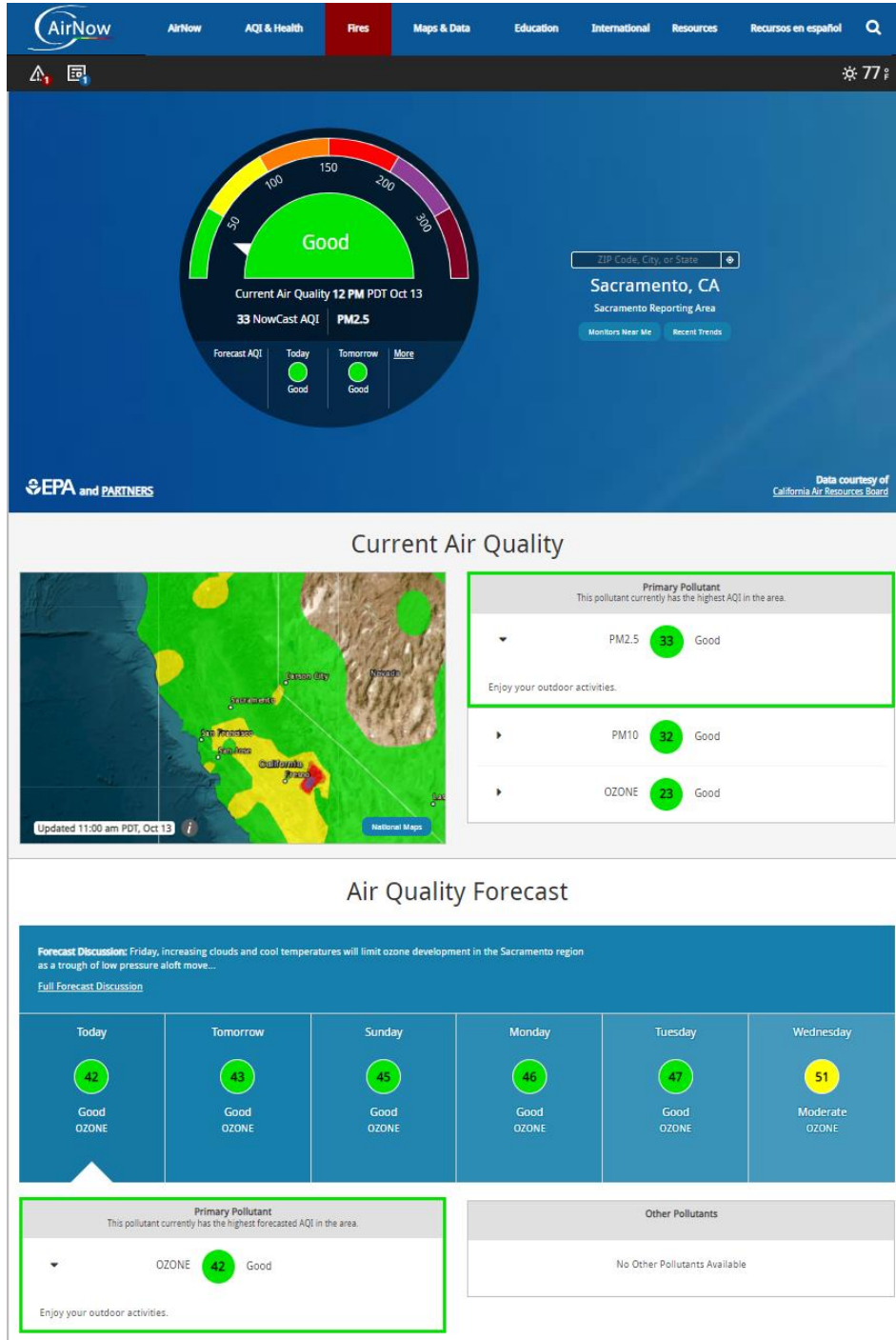
⁸⁰ American Lung Association, *Most Polluted Places to Live*, <https://www.lung.org/research/sota/key-findings/most-polluted-places>, October 12, 2023.

⁸¹ American Lung Association, *State of Air*, <https://www.lung.org/research/sota/key-findings>, October 12, 2023.

⁸² California Air Resource Board Emissions for User Defined Query, <https://ww2.arb.ca.gov/applications/emissions-user-defined-query>, October 12, 2023.

later, the AQI can help SMUD determine the most appropriate pollutant specific mitigation measures.⁸³

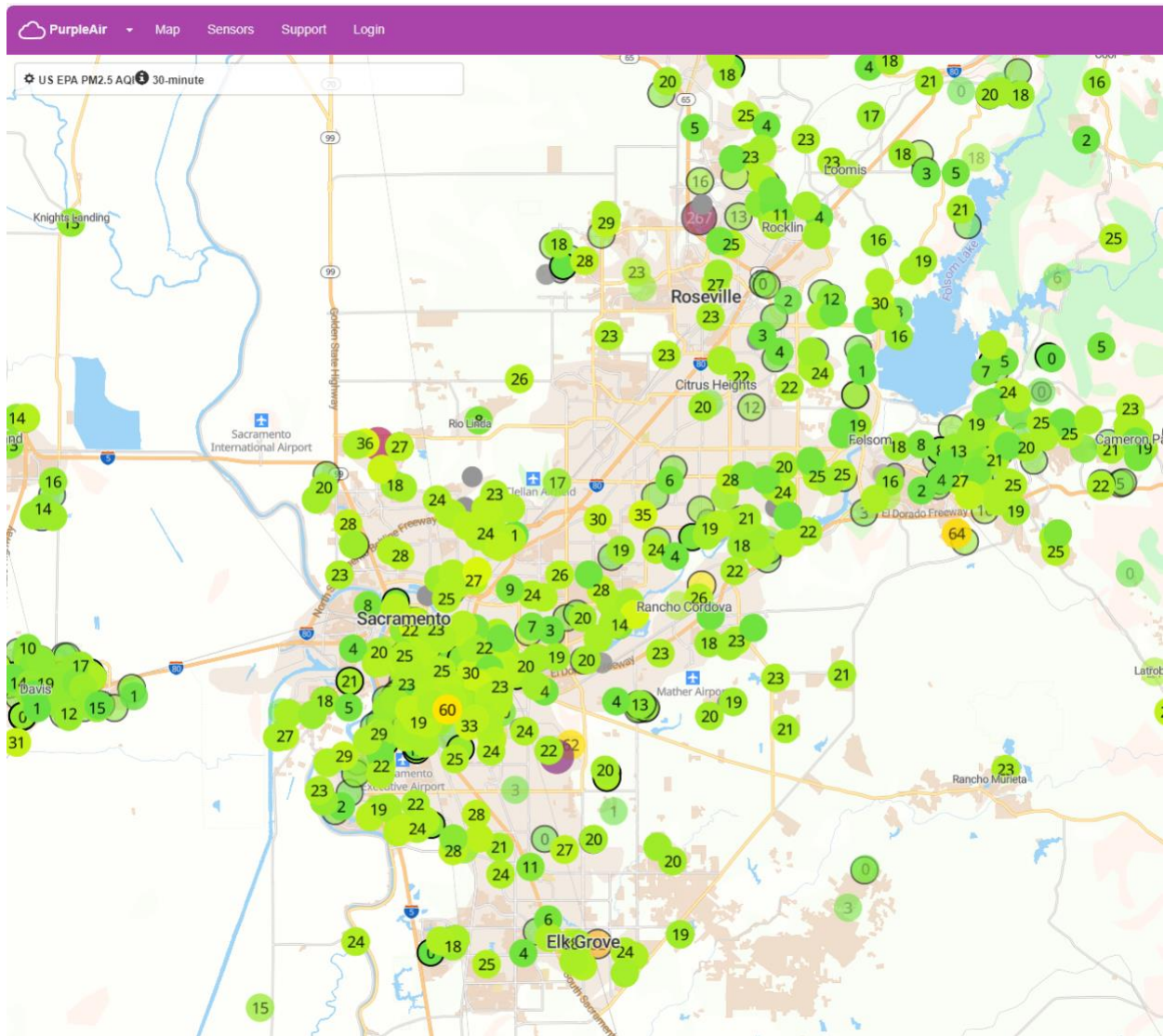
Figure 31: AirNow: Air Quality Sacramento Region⁸⁴



⁸³ [AQI Basics | AirNow.gov](https://www.airnow.gov)

⁸⁴ Air Now, Air Quality Sacramento Region, [AirNow.gov](https://www.airnow.gov), October 2023.

Figure 32: Purple Air: Air Quality Sacramento Region⁸⁵



⁸⁵ Purple Air, Air Quality Map Sacramento Region, [PurpleAir | Real-time Air Quality Monitoring](https://purpleair.com/), October 2023.

18.1.2 Current Mitigation Efforts

The table below depicts the mitigations for air pollution hazards.

Mitigation	Description
2030 Zero Carbon Plan	SMUD will continue to evaluate its strategy to reduce its own greenhouse emissions while maintaining electrical reliability for its customers. These strategies include the potential reduction of its fossil fuel use among its power plant fleet, retooling its existing equipment to operate on non-fossil fuels, and/or helping the region electrify both its vehicle and buildings.
Air Quality Standards	SMUD will continue to comply with all local, state, and federal air quality rules and regulations as it applies to its affected equipment and operations. SMUD will also continue to partner with local agencies and industry to influence policies and regulations that improve air quality and reduce potential harmful exposure to poor air quality, and wildfire smoke.
Emergency Operations Center (EOC)	The SMUD Emergency Preparedness Duty Officer will monitor daily National Weather Service forecasts for major air quality impacts and will consider proposing activation of the EOC when AQI is equal to or greater than 500 for two consecutive days across a significant area of the service territory. An AQI at or above 500 is considered an immediate hazard to human health.
Worker safety standards	This standard applies to all SMUD employees, performing various job activities, as identified where the Air Quality Index (AQI) for PM2.5 is greater than 150 to provide guidance on protection for employees during wildfire events. An AQI above 150 to 200 is considered unhealthy for some of the general public, with people in sensitive groups experiencing serious health effects.
Building ventilation critical operations	Facilities shall ensure building HVAC filters are inspected and replaced, as needed, during a wildfire events. Facilities will have resources or contracts available to obtain mobile air scrubbers if needed for use at critical infrastructure buildings like the PSO, DSO, Contact Center, Energy Trading, Security Operations.

18.2 Avalanches

An avalanche is weather-related threat that occurs when a mass of snow mixed with ice and debris travels down a mountainside. Avalanches occur in steep mountainous areas of California that receive significant amounts of snow. Avalanches can occur from one or a combination of these components: overloading, temperature, slope angle, snowpack conditions, and vibrations. The most at risk are mountainous areas that have a slope of 25° to 60°.

Avalanches have caused property damage and loss of life in California. Significant events have damaged or destroyed ski resorts at Mt. Shasta and Lake Tahoe. Avalanches have also blocked and damaged roadways. The Plan Area lay amongst the highest regions of Avalanche risk in the State of California. Avalanches can pose a major threat to the communities and SMUD’s or WAPA transmission lines, powerhouses, reservoirs, roads, and other infrastructure in the UARP. Secondary impacts may impact SMUD’s customers residing outside of the regions susceptible to avalanches.

Because SMUD has not experienced avalanches, there is not sufficient data to describe the extent of damages.

18.3 Drought and Water Shortage

Drought is a gradual phenomenon, occurring slowly over a period of time, caused by a rainfall deficit, and often combined with other predisposing factors. It is difficult to quantify the beginning and ending of a drought. There are four different categories in which a drought can be categorized based on its effects (see table 54).

18.3.1 Hazard Profile

Type	Description
Meteorological drought	Having below average water supply.
Agricultural drought	Overdraft of groundwater to meet the state’s crops and agricultural needs because of insufficient water supplies.
Hydrological drought	Lacking surface and subsurface water supplies such as snowpack, streamflow, or lakes.
Socioeconomic drought	Having adverse economic or health impact on a region.

SMUD’s Plan Area has a Mediterranean climate. The summers are dry and warm, and the winters are wet and cool. Its proximity to the Pacific Ocean and major mountain ranges defines most of the State’s precipitation and runoff. A majority of the water vapor that provides the State’s precipitation comes from the ocean. The snowpack in the Cascade Range and the Sierra Nevada contributes to the runoff in the rivers and groundwater

basins. Approximately 75% of the state’s annual precipitation occurs between November and March. Many California’s droughts stem from an absence, or reduction, of winter precipitation.

Exposure and Vulnerability

California experienced one of the worst droughts in history from 2012 to 2017: 102 million trees died during that time period. This has increased SMUD’s vulnerability for tree mortality. In 2014, 100% of the State was experiencing a drought ranked “severe” or worse. During the period of 2012 to 2015, Lake Tahoe warmed 15 times faster than it had historically. The drought became so severe that Governor Jerry Brown instituted a mandatory 25% water restriction in 2015. The drought exacerbated wildfires during those years.

California’s most significant historical statewide droughts were 1929-34, 1976-77, 1987-92, 2007-09, 2012-17 and 2020-2022 (see table 55).

Table 55: Historical Droughts in California		
Year	Duration (years)	Description
1929-34	6	Occurred when the state’s urban and agricultural developments were minimal, therefore the impacts to the economy and community were substantial.
1976-77	2	Brief but severe due to the low amounts of precipitation and runoff.
1987-92	6	Impacted the entire state of California by almost completely depleting the State’s major water reserves and projects.
2007-09	3	First ever-statewide proclamation of emergency for drought was issued. Water shortages resulted in economic burdens to agriculture and to rural communities.
2012-17	6	Issued California’s second ever-statewide proclamation of emergency for drought. Recorded its lowest annual precipitations in four consecutive years (2012-2015).
2020-22	3	Driest three-year period dating back to 1896, resulting in a state of emergency across California.

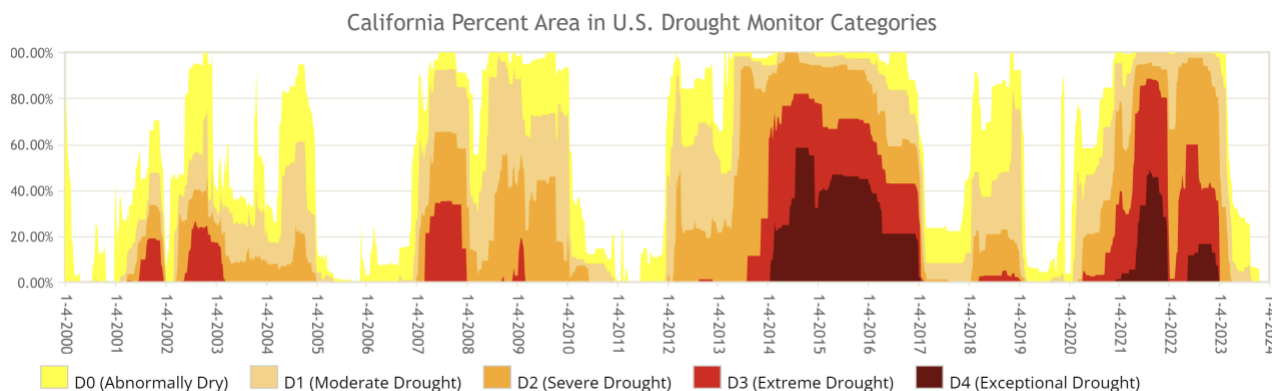
In 2015, at the drought’s most severe point, snowpack was estimated to be at 5% of normal levels. The previous lows for snowpack depletion were in 2014 and 1977, each at 25% of normal levels. During a “normal” year, snowpack contributes 30% of California’s water needs⁸⁶.

Figure 33 below depicts drought intensities from 2000-2023 compiled by the US Drought Monitor. The drought was at its worst for many months beginning in mid-2014 and extending through the end of 2016. In January of 2017, the multi-year drought abruptly

⁸⁶ Source: *California Department of Water Resources*

ended with a period of excess rainfall.⁸⁷ California returned to drought conditions in 2020, with the drought continuing until 2022.

Figure 33: California Percent Area in U.S. Drought Monitor Categories 2000 to 2023⁸⁸



Drought impacts are felt first by people most dependent on annual rainfall – such as ranchers using dryland range or rural residents relying on wells in low-yield rock formations. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. The most common secondary effects of drought that are realized by SMUD and occupants in its Plan Area are the environmental impacts such as wildfire hazard, increased tree mortality, the reduced availability of surface water, and the loss of biodiversity in the animal and plant species in the area.

Past Events

The Plan Area has experienced prior drought conditions in recent years with drought periods recorded 2020-2022, 2012-2017, 2007-09, 2000-04, 1987-92, 1975-77 and 1959-61. Table 59 shows the available data found for most recent drought events available in the NCDC database for the Plan Area.

County/Zone	Date	County/Zone	Date
Carquinez Strait and Delta	09/01/2015	Carquinez Strait & Delta	06/01/2016
San Joaquin Valley	09/01/2015	Motherlode Camptonville	07/01/2016
Sacramento Valley	09/01/2015	San Joaquin Valley	07/01/2016
Sacramento Valley	10/01/2015	Motherlode Camptonville	08/01/2016
Sacramento Valley	11/01/2015	San Joaquin Valley	08/01/2016

⁸⁷ This map shows exceptional drought as D4 in dark red, extreme drought as D3 in red, severe drought as D2 in orange, moderate drought as D1 in light orange and abnormally dry as D0 in yellow.

⁸⁸ US Drought Monitor, <https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx>, October 31, 2023.

⁸⁹ Source: NCDC (www.ncdc.noaa.gov) 13 December 2017

Table 56: Selected List of Drought Events in SMUD Plan Area⁸⁹

County/Zone	Date	County/Zone	Date
Carquinez Strait and Delta	12/01/2015	Motherlode Camptonville	09/01/2016
Sacramento Valley	12/01/2015	San Joaquin Valley	09/01/2016
Sacramento Valley	04/01/2016	Motherlode Camptonville	10/01/2016
Carquinez Strait and Delta	04/01/2016	Sacramento Valley	10/01/2016
Motherlode Camptonville	04/01/2016	San Joaquin Valley	11/01/2016
Sacramento Valley	05/01/2016	Motherlode Camptonville	11/01/2016
Motherlode Camptonville	05/01/2016	San Joaquin Valley	12/01/2016
San Joaquin Valley	05/01/2016	San Joaquin Valley	01/01/2017
Carquinez Strait and Delta	05/01/2016	San Joaquin Valley	02/01/2017
Sacramento Valley	05/01/2016	Motherlode Camptonville	02/01/2017
San Joaquin Valley	06/01/2016	San Joaquin Valley	03/01/2017
Motherlode Camptonville	06/01/2016	Motherlode Camptonville	03/01/2017
Sacramento Valley	06/01/2016	Sacramento Valley	11/01/2021

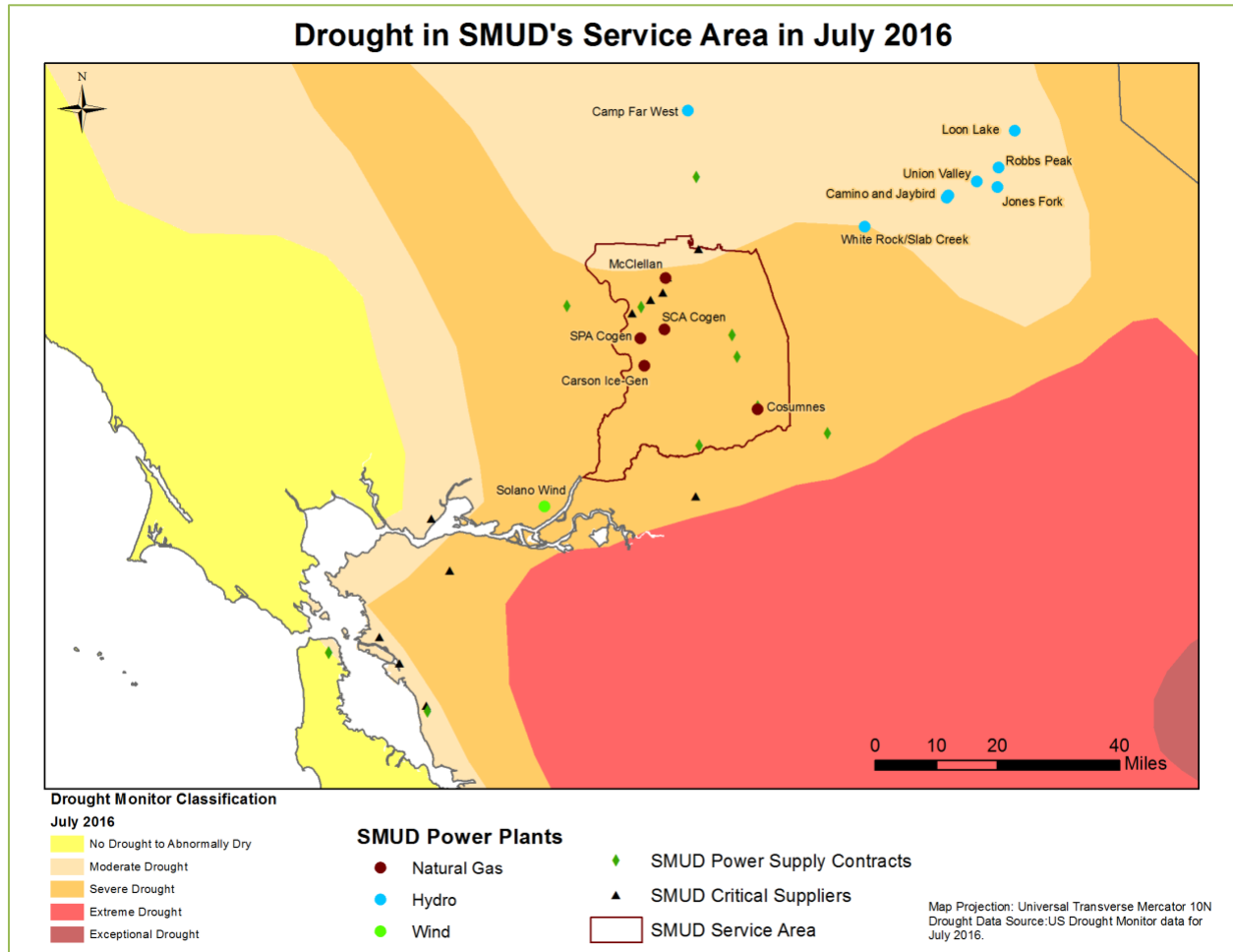
Most detrimental to SMUD’s operations and its ability to serve its customers during a drought, is the reduced ability to generate hydroelectric power. A reduction of hydropower generation and water quality deterioration are potential hazards that could affect SMUD during an extended drought period. Droughts have the capacity to affect the following:

- Hydropower: lower water levels impact production capacity in hydroelectric plants
- Biomass: changes in seasonal precipitation patterns can impact vegetation growth, altering the availability of feedstock for biomass generators.

Figure 34 depicts July 2016 drought impacts to the SMUD service area and SMUD power plants as defined by the United States drought monitor.⁹⁰

⁹⁰ Drought shapefiles for July 2001-2016 were downloaded from the U.S. Drought Monitor GIS Data Archive. Available at: <http://droughtmonitor.unl.edu/MapsAndData/GISData.aspx>

Figure 34: SMUD Plan Area Drought Conditions for July 2016 as Classified by the U.S. Drought Monitor



18.3.2 Current Mitigation Efforts

Based on the results of SMUD's Climate Readiness Action Plan assessment, SMUD continues to monitor how drought impacts energy generation and commodity costs. SMUD has several initiatives that reduce the risk of water shortages in drought conditions, including the hydro rate stabilization fund that accrues money to purchase replacement power in years with lost hydropower generation. Additionally, SMUD is in cooperation of the SPA with the Sacramento Regional County Sanitation District (Regional San) to deliver recycled water from Regional San treatment facilities to be used for cooling and fire protection at the SPA power plant. The table below depicts mitigation efforts for drought hazards.

Table 57: Current Drought Hazards Mitigation

Mitigation	Description
Rate stabilization fund	SMUD has funds set aside to help maintain electric rates for SMUD customers in times of extreme dry weather.
Evaluations	Consider various evaluation options to hedge low rain fall.
Measurements	SMUD’s hydro staff conduct snow surveys and measure water elevations and flows periodically to be utilized by SMUD’s Energy Trading and Contractors staff in managing the water storage resource as efficiently as possible throughout the year.
Alternative storage	Pump storage project Junction Reservoir to Union Valley ~50MW.
Water conservation	SMUD complies with water conservation efforts by the State of California.
Drought resistant landscaping	SMUD has replaced its landscaping with drought resistant landscaping and will continue to do so where appropriate.

18.4 Hazardous Material Release

Hazardous materials have properties that make them potentially dangerous and harmful both to human health and the environment. The Department of Toxic Substances Control (DTSC) regulates hazardous materials in California. DTSC defines hazardous materials as materials with properties that make it potentially dangerous or harmful to human health or the environment. The universe of hazardous materials is large and diverse. Hazardous materials can be liquids, solids, or contained gases.⁹¹

18.4.1 Hazard Profile

An accidental hazardous material release can occur wherever hazardous materials are manufactured, stored, transported, or used. There could also be incidents of intentional hazardous release either from terrorist or provocateur activities. Depending on the material involved, the release may affect nearby population and/or contaminate critical or sensitive environmental areas within the Plan Area.

The release of hazardous materials to the environment could damage the environment, property, or human health. The extent of damages is dependent on the type, location, quantity, concentration, physical, chemical and/or infectiousness of the material released. Although hazardous material incidents can happen almost anywhere, certain areas of the state are at higher risk. These include areas: near roadways (frequently used for transporting hazardous materials), adjacent to industrial facilities (that use, store, or dispose hazardous materials), and crossed by certain railways, waterways, airways, and pipelines (that transport hazardous materials).

Releases of explosive and highly flammable materials have been known to cause fatalities and injuries, necessitate large-scale evacuations, and destroy millions of dollars’ worth of

⁹¹ <https://dtsc.ca.gov/>, Defining hazardous waste, <https://dtsc.ca.gov/wp-content/uploads/sites/31/2015/05/DefiningHazardousWaste.pdf>

property. Toxic chemicals in gaseous form have been known to cause injuries and fatalities among emergency response teams and passersby. Serious health effects have been known to result when toxic materials enter surface or ground water-supplies. Releases of hazardous chemicals have been especially damaging when they have occurred in highly populated areas or along heavily traveled transportation routes.

18.4.2 Exposure and Vulnerability

SMUD's Plan Area is a mix of urban, suburban, and rural areas. Military and former military installations located in SMUD's Plan Area must be considered as potential sources for hazardous material releases. When a hazardous material emergency occurs, multiple resources are available with the local fire departments typically leading response activities. SMUD's Plan Area contains major transportation arteries, such as interstates, highways, railroads, and airports, each facilitating the transport of hundreds of thousands of tons of hazardous materials through and into SMUD's Plan Area each year. SMUD is highly exposed to the effects of a major catastrophic hazardous material emergency due to the proximity of the transportation routes to densely populated areas. Additionally, SMUD must be concerned with the Port of West Sacramento and the various bulk gasoline terminals located along the Yolo County side of the Sacramento River front because prevailing winds come from the southwest. Considerations must be made also for the numerous agriculturally related businesses located within the response/mutual aid area.

SMUD's Plan Area contains major oil and gasoline terminals, drinking and wastewater pumping facilities, and numerous large diameter underground pipelines. Agriculture uses large quantities of pesticides and chemicals that are stored at numerous sites. Fixed facilities are limited to small industrial parks within or near the incorporated cities. Air transportation of hazardous materials involves the smallest quantities but still poses a potential hazard.

There are also numerous underground and aboveground storage tank facilities for flammable liquids throughout SMUD's Plan Area.

18.4.3 Current Mitigation Efforts

SMUD owns and/or operates several potential sources of hazardous materials releases. SMUD follows all federal, state, and local regulations relating to the use, storage, and disposal of hazardous materials. All hazardous material Safety Data Sheets specific to an asset or location are kept on site and also available online. Field and support staffs are trained to respond to leaks, spills, and discharges. All SMUD facilities above regulatory mandated quantity thresholds operate under Hazardous Materials Business Plans (HMBPs) prepared by the Environmental Services Department. These plans are updated annually and certified as accurate with the applicable local governing agency.

18.5 Oil Spill

18.5.1 Hazard Profile

An oil spill is a release of liquid petroleum into the environment due to human activity or technological error that results in the pollution of land, water, or air. Oil spills can also

occur naturally through oil seeps on land or underwater. Depending on the size, origin, and duration of the release, an oil spill can have serious impacts on water quality, public health, plant and animal habit, and biological resources. The cleaning and remediation of large spills can cost millions of dollars and the environmental and social impacts can last for many years. Common causes of oil spills include human-caused mistakes, equipment malfunctions or failure, natural disasters, terrorist acts, and/or illegal dumping.

18.5.2 Exposure and Vulnerability

Some of SMUD's electric and mechanical equipment utilize oils to operate. This equipment and affected facilities are located on land near stormwater systems and waterways. However, SMUD is at very low risk for the likelihood of an oil spill event because of existing mitigations (see table 61: Current Hazardous Materials and Oil Spill Hazards Mitigation).

SMUD's Plan Area is land-locked and is not susceptible to underwater seeps or disasters related to offshore oil drilling. The most likely oil spill hazards threatening SMUD's Plan Area is the release of oil from either third-party vehicle accidents (involving SMUD's oil-containing equipment) or the malfunction/failure of the oil-containing equipment.

Today, our five natural gas plants provide low-cost, reliable power 24/7. Eliminating greenhouse gas emissions from our power plants is essential to reach our zero-carbon goal by 2030. We're focused on reimagining our existing generation portfolio to eliminate greenhouse gas emissions through replacement, re-tooling and using renewable fuels. To drastically reduce SMUD's fossil fuel related greenhouse gas emissions, we currently plan to adjust the utilization of the generation fleet by placing at least 2 power plants while exploring retrofit technologies such as alternative fuels and/or post-combustion controls. Maintaining reliable electric service is critical, so we will conduct more detailed reliability assessments before finalizing plans for our natural gas power plants.

We will expand the use of our existing carbon-free energy technologies like wind, solar, hydro, biomass, geothermal energy, battery storage and demand response. While these proven carbon-free technologies aren't fully capable of achieving our 2030 zero carbon goal, they can help get us about 90% of the way there. Today, SMUD's power supply is about 50% carbon-free. Our plan includes adding ~3,000 Megawatts of new renewable energy and storage, which is equivalent to the energy needs of more than 600,000 homes per year. This includes growing rooftop and battery storage adoption.

We will explore new and emerging technologies—like power-to-gas technology, hydrogen and methane, long-duration batteries, and carbon sequestration—that are either currently unknown or are not ready for large scale adoption due to price, reliability or other factors. This work will help us identify potential partnerships and business models like virtual power plants, and launch pilot projects and programs to test and prove new and emerging technologies and develop paths for prioritizing technology adoption and scaling.

Our road map to zero carbon identifies cost ranges and rate impacts associated with expanding our existing proven clean technologies and for researching and piloting new technologies and business models. We're focused on making sure achieving our zero-

carbon goal is possible at a reasonable cost that minimizes rate increases for our customers, limiting rate impacts to the annual rate of inflation. We'll do that by identifying savings and pursuing partnerships and grants that support the Zero Carbon Plan.

18.5.3 Current Mitigation Efforts

The table below depicts the mitigation activities for hazardous materials and oil spills.

Table 58: Current Hazardous Materials and Oil Spill Hazards Mitigation	
Mitigation	Description
Spill Prevention Control and Counter Measure (SPCC) Program	<p>The SPCC program provides mitigation control to prevent discharges of oil, and properly respond to discharges of oil, if it does occur. Facilities with equipment over mandated storage volumes (either individually or cumulatively) are part of a SPCC plan. The plan outlines equipment requirements and engineering controls, inspection criteria and frequencies, recordkeeping, and reporting requirements.</p> <p>For example, Appendix B of SMUD's Substation Specific SPCC Plan contains the "Substation Maintenance Oil Spill Cleanup for SMUD Substation Facilities" and the "Environmental Services Oil Spill Response for SMUD Substation Facilities" procedures. These oil spill cleanup and contingency procedures contain guidelines for performing the necessary oil spill cleanup, notifications, and reporting. The Substation Maintenance procedure identifies the actions that shall be taken by Substation Maintenance personnel upon discovering and responding to an oil spill. The Environmental Services procedure identifies the actions that shall be performed by HazMat Services and Environmental Services personnel when responding to an oil spill at a SMUD substation facility. These procedures were written to ensure that any oil spill at a substation facility is cleaned up as expeditiously as possible in an environmentally responsible manner.</p> <p>In addition to the information included in the above procedures, the SPCC plans also outline that SMUD maintains: 1) HazMat Services, Substation Maintenance, and Environmental Services personnel on-call at all times to ensure that an oil spill is cleaned up as soon as reasonably possible; 2) an Emergency Contact List which lists local, state, and federal regulatory agencies as well as key SMUD personnel; 3) guidelines for performing the necessary oil spill notifications and reporting requirements.</p>

Table 58: Current Hazardous Materials and Oil Spill Hazards Mitigation

Mitigation	Description
Hazardous Material Business Plan (HMBP)	<p>The HMBP program is overseen by the local Certified Unified Program Agency (CUPA) (e.g., a local agency certified by the California Environmental Protection Agency to implement and enforce State hazardous waste and hazardous materials regulatory management programs). The HMBP provides an inventory of materials and outlines mitigation controls to prevent or minimize harm to public health, safety, the environment, from a release of a hazardous material. A HMBP is required when hazardous materials are present above certain threshold quantities at a site.</p> <p>The plan contains detailed information about the hazardous materials stored onsite, including but not limited to 1) inventory volumes and/or weights; 2) detailed site map(s) and applicable material storage and handling location(s); 3) important SDS details and signage; 4) site specific emergency response plans; and 5) personnel training requirements and frequencies; and 6) recordkeeping and reporting requirements. As such, the plan is also shared via an online database with local agencies and first responders. This helps ensure that outside agencies understand the hazardous present at an applicable site.</p>
HMBP Emergency Response Plan	<p>The Emergency Response Plan is a subset of the HMBP. It is site specific and details the procedures in the event of a release (or threatened release of a hazardous material), including, but not limited to: 1) immediate notification contacts to the appropriate local emergency response personnel and to the CUPA; 2) mitigation of a release (or threatened release) for each hazardous material to minimize any potential harm or damage to persons, property, or the environment; and 3) evacuation plans and procedures.</p>
Training	<p>SMUD’s personnel is trained to handle and report hazardous material and oil spills in the same general manner for facilities storing hazardous materials in quantities below SPCC and/or HMBP applicability thresholds.</p>
Engineering Controls and Best Management Practices	<p>SMUD uses a mixture of engineering controls and best management practices (BMPs) to design and operate the facilities and their respective equipment in a manner that reduces the likelihood of a spill or release. Engineering controls include emergency sumps large enough to capture spilled oil within a facility, visual and/or audible alarms to manage storage tank volumes and prevent storage tank overfill, and “oil minder pumps” that prevent the pumping of oil impacted water out of catch basins. BMPs include establishing equipment inspection frequencies, using standard inspection forms, installation of additional signage, and training specific to a site or asset.</p>

Table 58: Current Hazardous Materials and Oil Spill Hazards Mitigation

Mitigation	Description
Contractor and Vendor Support	SMUD maintains contracts with qualified emergency response environmental contractors and waste vendors. These vendors ensure that SMUD can mitigate releases, remediate an affected site to its original pre-spill condition, and ensure that hazardous materials are handled, transported, and disposed of in accordance with all state and federal requirements.

18.6 Natural Gas Pipeline Hazards

18.6.1 Hazard Profile

SMUD owns and operates 76 linear miles of natural gas pipelines. Natural gas from these pipelines is required to operate SMUD’s thermal power plants and to help SMUD meet its load serving capability. SMUD’s pipelines are in and near communities where people work and live. In operating the pipelines, safety is SMUD’s top priority. SMUD is committed in protecting the people, environment, and communities along these pipelines.

18.6.2 Exposure and Vulnerability

SMUD’s gas pipelines are fewer and newer as compared with other utilities. However, in the event of a gas pipeline breach, impacts could result in total loss of assets and damage to surrounds up to and including loss of life.

Increasing population growth in urban areas is resulting in a greater number of people living and working closer to existing gas transmission pipelines. The aging of SMUD’s gas transmission system also slightly increases the risk of potential disaster. Causes of and contributors to pipeline failures include third party damage, construction defects, material defects, internal and external corrosion, operational errors, control system malfunctions, outside force damage, subsidence, and seismicity.

18.6.3 Current Mitigation Efforts

The Department of Transportation’s Pipeline and Hazardous Materials Safety Administration (PHMSA) is the primary safety regulator of the pipeline system. Its regulations and safety standards address a variety of issues affecting pipeline safety, including pipe and component manufacture, how pipelines are built, operated, maintained, and inspected, how personnel are trained, and how companies respond to emergencies.

SMUD meets and exceeds all regulatory requirements through SMUD Gas Pipeline Operations integrity management program which includes, detective controls through line patrols and leak detection systems, process controls, participation in the USA North 811 system (call before you dig) and engineering controls such as remote operating valves with LineBreak systems to respond to gas leaks. These controls are implemented to ensure public safety and prevent compromise to SMUD’s gas transmission systems.

SMUD is a member of USA North, which provides a free damage prevention service to protect citizens, the community, the environment, essential public services, and underground facilities in Central and Northern California and all of Nevada. USA North

notifies SMUD of any excavation that may occur on or near our buried infrastructure. SMUD’s participation in this organization helps to reduce the risk of damage to SMUD’s infrastructure and increases public safety.

SMUD is also a member of the California Regional Common Ground Alliance (CARCGA) which is a body that establishes industry best practices and is comprised of underground utility operators and excavation companies. CARCGA also serves as an advisory committee to the California Dig Safe Board which is the state entity responsible for revising and adopting state excavation law. The table below depicts mitigation activities for radiological hazards mitigation.

Mitigation	Description
811 USA process	Protects the community and SMUD’s high priority sub surface installation.
Integrity Management Program	Encompasses all maintenance activities on the gas pipeline to ensure the integrity of the pipelines. This is done through periodic inspections, including internal line inspections, monitoring cathodic protection, and periodically exposing gas pipelines for direct assessment. Includes public awareness program which informs people that there are underground utilities and that they need to contact 811 prior to digging.
Regulatory oversight	Various entities have oversight over the safe operations of SMUD’s gas pipeline systems including DOT PHMSA, CEC, and State Dig Safe Board.
Operator Qualification Program	All Gas transmission operators are required to have an operator qualification program under 49 CFR 192 to ensure that all persons who perform maintenance activities on natural gas transmission lines meet the qualification requirements of 49 CFR 192.
Exercises	Periodic emergency exercises to test emergency action plans and make updates and changes where appropriate.
Emergency Action Plan	The plan outlines the emergency response to any incident on the gas pipeline.
Agency coordination and collaboration	Participate in various organizations to share best practices and latest technologies in gas pipeline operations and maintenance. Collaborate with neighboring utilities regarding public awareness and damage prevention.
Mutual Aid Agreement	Agreement for either entity upon need or request to provide assistance in responding to emergency events involving the gas pipeline.
Flood mitigation	Install flood mitigation measures to protect gas pipeline assets from impacts of future flood events.

Table 59: Current Radiological Hazards Mitigation

Mitigation	Description
Real-time monitoring	Obtaining software to monitor various factors that have the potential to increase pipeline risks e.g., news outlets, public unrest, etc. Will include SMUD data to monitor pipeline integrity.
Quantitative risk assessments	Leveraging artificial intelligence to enhance SMUD’s integrity management activities which may lead to potential future projects.

18.7 Nuclear Hazards

Nuclear hazard is referred to as the risk or danger to any living species or environment posed by radiation emanating from the atomic nuclei of a given substance.

18.7.1 Hazard Profile

There are no natural nuclear hazards in the Plan Area. There is a very low probability of accidental exposure of solid material managed by local businesses, including SMUD. Close up, unprotected exposure to radioactive materials can have negative long term health effects.

18.7.2 Exposure and Vulnerability

SMUD owns the decommissioned Rancho Seco Nuclear Generating Station. Spent fuel is stored onsite in the Independent Spent Fuel Storage Installation (ISFSI) awaiting the DOE direction to move it to an appropriate facility. Rancho Seco is in Sacramento County, 25 miles southeast of the City of Sacramento and 26 miles northeast of the City of Stockton, the two largest cities within a 50-mile radius of the site. The site occupies approximately 14 of the 2480 SMUD-owned acres at the Rancho Seco site, which is flat to rolling terrain. The nearest population center of 25,000 or more is the City of Galt, which is about 10 miles northwest of the site. State Route 104 runs north of the site in an east-west direction. Route 104 connects with U.S. Route 99 and Interstate 5 to the west and State Routes 88 and 12 to the east.

The area near Rancho Seco is sparsely populated and is used primarily as grazing land and grape vineyards. The only public use facility within a 5-mile radius of the site is the Rancho Seco Reservoir and Recreation Area, which is located approximately 1 mile southeast of the site and is within the land owned by SMUD. There is no indication of geological faulting at the site.

The risk that radiation exposure because of long-term storage of nuclear spent fuel at Rancho Seco may result in environmental, health and safety risks is extremely low. Incidents that lead to a breach of spent fuel canister integrity are unlikely to occur.

The ISFSI Safety Analysis Report (SAR) discusses the design criteria and accident analysis criteria for the spent fuel storage system. It identifies potential incidents such as fires associated with combustible materials, loss of contamination control, natural phenomena, and external human caused events such as terrorism. The ISFSI SAR provides an analysis of

the following incidents: human caused events, earthquake, fire, tornado, flood, lightning, and snow loads. The result of these analysis state that there are no credible events that would result in the exposure of the public, outside of the ISFSI licensed area, above the limits stated in the regulation.

18.7.3 Current Mitigation Efforts

The table below depicts mitigation actions for radiological hazards.

Mitigation	Description
Rancho Seco site-specific Emergency Plan approved by the Nuclear Regulatory Commission	In the event of an emergency occurring at Rancho Seco, the site-specific Emergency Plan will be implemented. Response includes activating emergency response facilities; making formal notifications to SMUD’s management, Nuclear Regulatory Commission, and Sacramento County Office of Emergency Operations; response and recovery activities.
Exercises	Every 2 years, SMUD leads an exercise with outside agencies to verify adequacy of the emergency plan and develop action plans to correct any identified variances as appropriate. Annually conduct on-site drills required by the emergency plan to evaluate training and implementation as well as identify potential deficiencies to correct via action plan.
Physical barriers and monitoring	Fence surrounds emergency planning zone with controlled access and various monitoring devices.
Law and regulations	SMUD continues to follow and apply rules and regulations under 10 C.F.R. §72.32 and any future updates as required.
State and Sacramento County Offices of Emergency Services	Periodic meetings to update agencies on emergency plan changes, share emergency response telephone directory (ERTD), and conduct semi-annual communication testing.
Radiation monitoring	Continuous monitoring of radiation badges quarterly.
Site specific physical security plan approved by the Nuclear Regulatory Commission	Site specific plan outlining specific physical security requirements and actions.
Monitoring Federal actions	SMUD is monitoring Federal actions for moving spent nuclear fuel.

18.8 Bird Strike

Bird strikes are defined as avian/ power line interactions including electrocutions, collisions and nesting, avian/ wind turbine collisions and avian/ aircraft interactions.

18.8.1 Exposure and Vulnerability

SMUD owns and operates several wind turbine facilities located in Solano County. Collisions between wildlife and turbines often occur, causing detriment to the wildlife as well as damages to SMUD facilities. In addition to damages, collisions between wildlife and

infrastructure can also create a threat of power disruption. SMUD’s infrastructure traverses the Pacific flyway for migratory birds. SMUD operates aircraft around the service area and UARP, which are also at risk from bird strikes. For SMUD, the most common bird strikes occur between birds and its overhead power lines which result in approximately 150 bird-focused outages per year. In addition, when there are bird collisions, 2-3 birds per year may get electrocuted and have the potential to start a grass fire. Grass fires are usually small and easy to control.

18.8.2 Current Mitigation Efforts

Basic mitigation strategies for bird strike are broken into three strategies: Increase resistance to bird strike, remove birds from an area, or move the infrastructure away from the birds (see Table 61).

Mitigation	Description
Design	SMUD has an Avian Protection Plan which requires SMUD to implement mortality reduce measures in response to bird-caused outages and the use of avian safe standards where it’s required to maximize phase separation and phase-to-ground clearance to minimize the risk of electrocution or to prevent perching where sufficient clearances cannot be achieved.
Wildlife management	Taking lethal and non-lethal measures to remove wildlife habitats and potential food sources from crucial infrastructure such as wind turbines.
Operations	SMUD has a bird and bat protection plan and an eagle take permit for the Solano Wind project which requires mitigation measures to be implemented when bird mortalities including eagle occur including curtailment of wind turbines to minimize bird mortality.
Relocation	If infrastructure is prone to bird strike, an investment might be made to relocate assets to reduce the likelihood of a hazardous event.

18.9 Pandemic

18.9.1 Hazard Profile

The World Health Organization defines a pandemic as an epidemic occurring over a wide area, usually affecting a large number of people. Pandemics typically occur when a new virus appears, toward which the human population has not built immunity. Historically, SMUD’s Plan Area has seen the influenza pandemics of 1918, 1957, and 1968, the Swine Flu pandemic, and most recently the COVID-19 pandemic⁹².

18.9.2 Assessment of Vulnerability

Pandemics are unpredictable and have the potential to adversely impact SMUD’s operations. SMUD’s aptness to predict and meet load demand is challenged heavily during a pandemic. Load demands may be hampered by consumers reacting to social distance

⁹² Source: Sacramento County Hazard Mitigation Plan

mandates and business and school closures. Pandemic-induced business closures may impact SMUD’s supply chain, affecting SMUD’s ability to procure supplies to meet new capacity demands and maintenance needs. Additionally, legislation⁹³ that aims to mitigate the economic hardship that a pandemic brings may hinder SMUD’s ability to collect payment from customers, further constraining SMUD’s operations. The assessment of vulnerability here is focused on moderate pandemic events which are more likely events to occur. However, in the event that more severe pandemic event was to take place, the impact could potentially be catastrophic.

18.9.3 Current Mitigation Efforts

By necessity of the COVID-19 pandemic, SMUD developed extensive pandemic mitigations (see Table 62). SMUD continued reliably delivering power to customers by utilizing the Emergency Operations Center, coordinating with local and state emergency management structures, and utilizing internal workforce health protections.

Mitigation	Description
EOC	Provides real-time coordination, incident command, response and recovery from emergencies, hazards, and catastrophes.
Regional response coordination	SMUD actively participates in city, county, and state emergency management structures for assuring coordinated responses to emergencies and disasters such as pandemics.
Workforce health protections	SMUD reserves the right to allow employees to work offsite, offer employees vaccinations, and instituting effective employee quarantines as appropriate.
Grace period for customer payments	SMUD has the option to provide a grace period and flexible payments plans for the payment of utility bills and refrain from pursuing collection remedies for unpaid bills for a period of time.
No shut-off policy	SMUD reserves the right to not disconnect power to a customer for non-payment of its electrical bill under certain conditions.
Increase filtration and clean air	Pilot Project, ionized air filtration for critical spaces.

18.10 Supply Chain Hazards

18.10.1 Hazard Profile

Many disruptors are driving supply chain gridlock and impacting end-to-end operations. Pre-pandemic supply chain vulnerability as a result of geographic concentration continue to be compounded by the effects of the pandemic and increased geopolitical tensions. As such, supply chain disruptions have affected operations across most industries, including

⁹³Source: *Washington Post* <https://www.washingtonpost.com/politics/2021/01/25/energy-202-biden-under-pressure-stop-utility-shutoffs-during-pandemic/>

the electric power sector. Unavailable materials, project delays, inflation, eroded capital budgets, prolonged labor shortages and strained operations are a few of the potential drivers of supply chain risk.

18.10.2 Assessment of Vulnerability

A number of factors make it challenging for SMUD's supply chains to operate efficiently and at full value. Material shortage and scarcity of crucial items, such as electric steel, electronic components, and cable, are disrupting supply. SMUD has been impacted by the lack of available transformers, many of which are manufactured overseas. Delivery times in many cases more than doubled, taking years to procure certain critical equipment such as transformers. These challenges continue to be exacerbated by the rise of geopolitical tensions. A recent Kearny article cited that "suppliers recognize the gap between demand and their supply of transformers, but even if they can increase production or bring it onshore, new facilities take time to build. Many shortages show no sign of letting up, with manufacturers struggling to fill orders during emergencies or canceling them altogether"⁹⁴. Figure 35 is a chart resulting from Kearny's client interviews.

In addition, supply chain shortages increase demand and prices continue to rise. Figure 35 shows the change in price for transformer cost showing largely unchanged prices through 2020 and a rise in 134 percent since then. The Kearny study noted a similar trend for electric wires and cable costs.

⁹⁴ Kearny, *Supply chain resilience can propel the power sector through the energy transition – and please investors in the process*, June 28, 2023, <https://www.kenarney.com/industry/energy/article/-/insights/supply-chain-resilience-can-propel-the-power-sector-through-the-energy-transition>.

Figure 35: Equipment Lead Time Changes⁹⁵

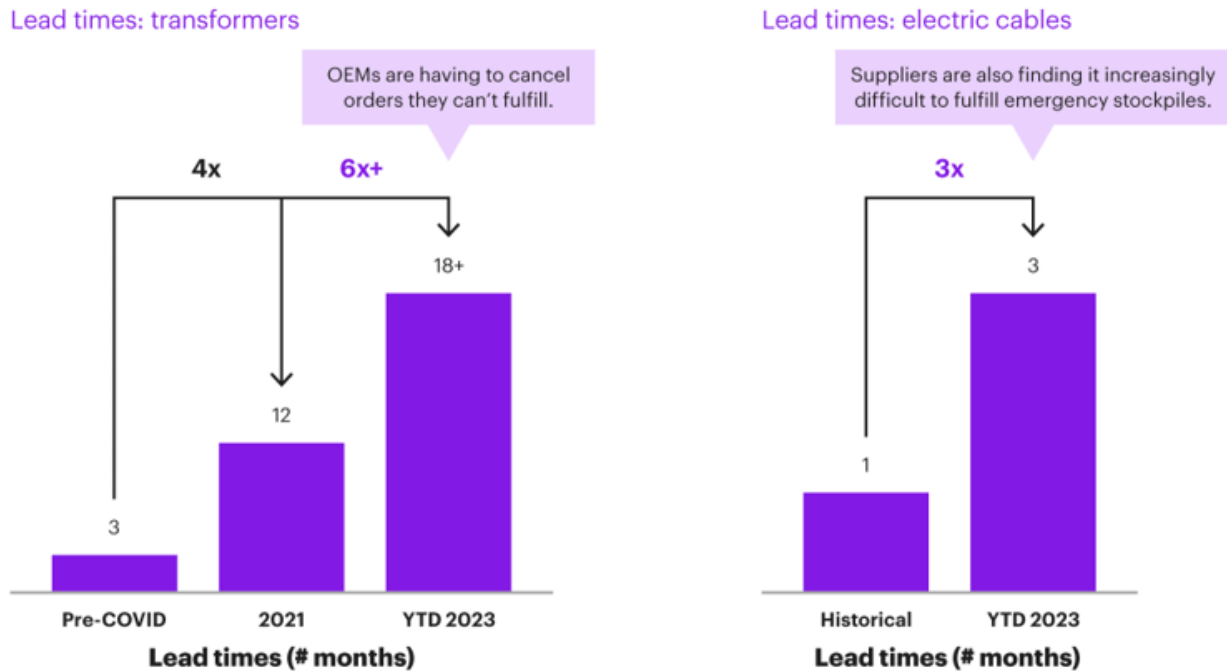
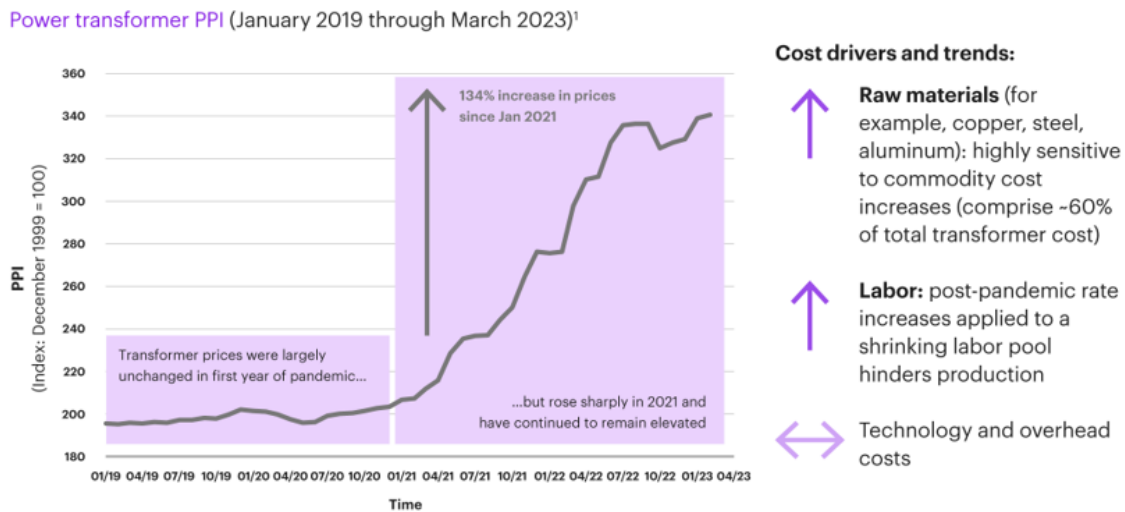


Figure 36: Equipment Lead Time Changes⁹⁶



⁹⁵ Kearny, *Supply chain resilience can propel the power sector through the energy transition – and please investors in the process*, June 28, 2023, <https://www.kenarney.com/industry/energy/article/-/insights/supply-chain-resilience-can-propel-the-power-sector-through-the-energy-transition>.

⁹⁶ Kearny, *Supply chain resilience can propel the power sector through the energy transition – and please investors in the process*, June 28, 2023, <https://www.kenarney.com/industry/energy/article/-/insights/supply-chain-resilience-can-propel-the-power-sector-through-the-energy-transition>.

Supply chain disruptions result in increased operational costs, project delays, the loss of productivity, increased lead times and customer impact.

For SMUD, this means potential delays in achievement of our goals, specifically the 2030 Zero Carbon Plan. Meeting a 100 percent clean electricity goal by 2030 requires increasing SMUD’s clean energy resource capacities. This means building new renewable energy projects, requiring more materials, many of which are imported. With high reliance on certain materials and competing demand from various industries, SMUD and other utilities are faced with potential delays or increased costs to achieve decarbonization. In addition, increasing customer capacity due to new construction and electrification in some instances requires new facilities be built to meet these demands.

18.10.3 Current Mitigation Efforts

The following table depicts mitigation activities for supply chain hazards.

Mitigation	Description
Mutual aid agreements	SMUD has mutual aid agreements with various agencies which establish protocols for sharing resources.
Emergency contracts	Emergency contracts with vendors to support the purchase of materials or services under emergency situations.
Establish and maintain safety stock levels and inventory on hand for critical and non-critical parts	SMUD has identified safety stock limits and periodically reviews these levels in meetings to ensure that they are still appropriate. This provides guidelines for SMUD’s Warehouse Operations and Procurement for purchasing requirements.
Regular risk review	SMUD has an established supply chain risk management framework which allows staff to identify and prioritize various categories of stock purchases and monitors those periodically to detect early warnings of potential current or future supply chain constraints.
Internal coordination	SMUD’s Procurement Team works closely with operational areas to plan and manage supply and demand forecasts.
Qualifying suppliers	SMUD has a process that qualifies suppliers to ensure that they are responsible and can deliver materials and services in a timely manner.
Evaluate supply and logistics	SMUD conducts regular evaluation of supplier landscape, logistics, and the external workforce.
Diversifying suppliers	SMUD generally sources primary and secondary suppliers from various national and global locations to reduce risk from geographic concentration.
Project prioritization	SMUD has a system in place to identify and prioritize projects so that critical equipment is not used on a project not ready to go online.

Part 3

Mitigation Strategy

19.0 Goals and Objectives

19.1 Authorities, Policies, Programs and Resources

SMUD's mitigation strategy is made up of three components required by Title 44 of the Code of Federal Regulations (C.F.R.). These components are goals, actions, and action plan.

SMUD is owned by its customers, who elect a seven-member Board of Directors. Each director represents a different geographic region within SMUD's service territory. The job of the SMUD Board is to establish policies and values about how SMUD serves its customers and to set the long-term direction in the form of strategic directives. All important decisions made by SMUD staff must support one or more of the strategic directives.

The development of SMUD's planning process, risk assessment, goal setting and identification of mitigation actions by SMUD's PC led to the mitigation strategy and mitigation action plans for the HMP. As part of the development process, a comprehensive review of the mitigation efforts and strategies were conducted by SMUD's PC, internal and external stakeholders, and subject matter experts (SMEs). The result was the HMP for SMUD with reorganized risk assessments and priorities. The mitigation actions from the 2018 HMP were refined and reaffirmed, and goals were added and deleted, as appropriate.

Throughout the process of planning for the HMP, the PC reviewed the results of the hazard identification, vulnerability assessment, and capability assessment. The analysis of the risk assessment allowed the PC to recognize areas in which improvements could be made and provided a framework for the PC to create goals and objectives to develop new mitigation strategies for SMUD's Plan Area.

Daily operations and decision-making are delegated by SMUD's Board of Directors to the General Manager and Chief Executive Officer, who along with other members of the Executive Team establish guidelines for SMUD activities. The most prominent guideline set by the Executive Team is SMUD's 2023-2026 Strategy. The top priority area is to Be Safe Always, which has a direct relationship to hazard mitigation. This commitment at the Executive level to safety is critical for SMUD whose primary activity is the generation and delivery of electricity. Not only is the generation and transmission of electricity an inherently hazardous activity but using stored water in mountainous terrain under pressure as the means of electrical generation expands the hazard.

SMUD management, departments, and employees recognize, value, and support projects that ensure a well-planned, coordinated, efficient, and rapid response in the event of an emergency to protect the lives, environment, and property of the citizens in communities where our assets and operations reside.

19.2 Risk Prioritization

SMUD's HMP leverages its existing ERM framework to identify and determine the hazards that SMUD is most vulnerable to. The ERM framework takes into consideration impacts to

SMUD's finances, legal, regulatory and compliance, operations, reputation, public safety, environment, and workforce. All hazards that are addressed in this plan have the capability of damaging SMUD's assets and operation in the Plan Area, and wildfire, drought, flood, and climate change are the most crucial.

19.3 Existing Mitigation Strategies

To identify and select mitigation actions that need to have additional practices implemented, or changed, the PC began by prioritizing hazards that were of high risk to SMUD's Plan Area. Hazards of high risk were those in which current mitigation actions needed to be re-analyzed, and it needed to be decided if additional mitigation actions could be implemented using SMUD's current technological capabilities. Low-priority hazard risks are often mitigated using mitigation actions of less specificity than those of high-priority hazards.

Once priority was determined, the PC analyzed additional actions that supported the identified goals and objectives of the HMP. The PC utilized examples of potential mitigation actions from a variety of other agencies. Preventative mitigation alternatives were discussed for each hazard, and additions were made to the existing strategies as deemed necessary.

Mitigation actions are listed with the associated hazards.

19.4 Mitigation Action Plans

Planning and prioritization of projects at SMUD is performed through a variety of mechanisms. High level guidance is provided in SMUD's 5-Year Strategic Plan (Strategic Plan), which represents a balance between the strategies, projects, programs, and other initiatives aimed at ensuring SMUD's success in an evolving energy industry. Goals and initiatives referenced in the Strategic Plan translate into more specific, action-oriented policies or projects and thus serve as a framework for achieving the intent of the Strategic Plan.

From this and other forms of guidance, individual asset managers, such as the UARP Asset Manager, must prepare a 3-Year Budget Plan that identifies operations and maintenance (O&M) and capital projects that are anticipated over the course of the next three years. The 3-Year Budget Plan is reviewed by the respective business area Directors and is recommended to the Executives, then the Board for final approval.

The priority associated with each project during each budget cycle is dependent on several factors that affect the relative importance of a project in any given year. Projects are either mandatory or discretionary and their inclusion in any given year's plan is based on regulatory requirements or their relationship to SMUD's guiding principles.

SMUD also evaluates projects across the organization to ensure Operational Excellence. This essentially translates into our Project Portfolio Management, which seeks to coordinate and align SMUD-wide resource allocation and operations over a 2-3-year planning horizon. A group of leaders from across SMUD, called the Operational Alignment

Team (OAT), meets regularly to select the overall portfolio of projects, both mandatory and discretionary, track progress throughout the year, and approve significant changes.

Each of these activities (OAT meetings, departmental planning, and project reviews) employ the same prioritization process that results in the general project classifications of high, medium, and low priority projects. The criterion for the three priority categories includes the following:

High Priority Project Criteria

- Needed to promote safety and protect the lives of SMUD workers and the public,
- Needed to protect SMUD infrastructure and public property,
- Risks are tied to recent disasters and expected to worsen under climate change,
- Strong public support,
- Viewed favorably or required by regulatory agencies,
- Strongly tied to the maintenance of electric stability and reliability,
- Clear and concrete long-term and lasting benefits,
- Highly favorable benefit/cost ratio, and/or
- Supported by pilot projects and/or other successful applications.

Medium Priority Project Criteria

- Enhancements to safety and protection of lives, but not absolutely needed,
- Enhancements to the protection of SMUD infrastructure and public property,
- Risks are not strongly tied to recent disasters and climate change,
- Moderate public support,
- Viewed as neutral by regulatory agencies,
- Uncertain and theoretical duration of benefits,
- Neutral benefit/cost ratio, and/or
- No pilot projects or other successful applications.

Low Priority Project Criteria

- Limited relationship to safety and the protection of SMUD workers and the public,
- Limited value in the protection of SMUD infrastructure and public property,
- Minimal to no public support,
- Risk(s) is/are not associated with historical disasters and not affected by climate change,
- No regulatory requirement, and/or
- Cost does not justify the benefits achieved from project deployment.

19.5 Plan Integration

An important project implementation mechanism is to incorporate the recommendation into existing business processes. The hazards outlined in this HMP will be one factor in risk assessments and review of projects and initiatives for SMUD and will be integrated into the project planning, budget, and risk assessment process.

20.0 Mitigation Best Practices and Adaptive Capacity

SMUD carries the primary responsibility for implementing and updating hazard mitigation strategies. The HMP is a living document that will be revised and improved over time to increase its effectiveness in implementing and properly tracking mitigation strategies. Staff will leverage SMUD's existing planning process in the implementation of this HMP.

20.1 Progress of Mitigation Efforts

SMUD's ERM Office (ERMO) (along with various associated business units) will monitor the implementation of each hazard mitigation, and the progress made towards the goals of the evolving, HMP. The PC will review and update the status of the implementation of mitigation actions on an annual basis. To standardize the monitoring of the HMP goals, status updates of its specific goals will be integrated into the existing ERM program activities.

SMUD's ERM program will consider the following to evaluate the effectiveness of the HMP:

- Has the risk environment changed?
- Are there other new and emerging risks that have the potential to impact the Plan Area?
- Do the identified goals and actions address the current and expected conditions?
- Have the mitigation actions been implemented or completed?
- Has the implementation of identified mitigation actions resulted in expected outcomes?
- Are current resources adequate to implement the mitigation plans?
- Should additional resources be committed to address the identified risks?
- What needs to be changed in order to achieve the expected outcome?

The ERMO is responsible for coordinating periodic discussions with stakeholders to perform a review of mitigations and consider whether mitigations need to be reestablished and/or are still relevant to the corresponding potential hazards.

It is important to note that addressing potential hazards requires viewing hazard mitigation strategies as long-term practices. However, these hazard mitigation strategies have a necessity to constantly evolve and become enhanced due to the growing threat of climate change and the speed of technological advances. Climate change is expected to increase the rate of and exacerbate hazards. This may require the adoption of new technology and the innovation of new mitigation techniques.

SMUD will need to constantly integrate the growing impacts of climate change into the HMP's hazard mitigation strategies. It is possible that efforts to reduce risk in the short-term may increase risk in the long-term.

20.2 Change in Priorities

SMUD's Executive Team reviews changes and proposed additions to the Enterprise Portfolio on a monthly basis to account for changes in commodity markets, work

progression, and adjustments to our priorities. The monthly Enterprise Portfolio Review meeting kicks off with our “Strategic Pulse Check” to ensure staff are focused on key projects and updates are made to the 6 Month Look Ahead. Both financial and performance snapshots are then reviewed for year-to-date progress towards our financial and operational goals. Project starts, stops, and changes impacting the portfolio are discussed for decision by the Executive team. New work presented to this team goes through the same process and scoring methodology as our annual planning process to review business case and resource availability. This information and approvals of new work enables SMUD to continually review and optimize our Enterprise Portfolio.

21.0 Action Plan and Implementation

21.1 Status of Previous Plan Actions

21.1.1 Mitigation Actions

The following table provides the status of prior mitigation actions.

Project Title	Hazard Addressed	Funding Type	Status
UARP Culvert System Upsizing	Flood	HMPG grant	In progress
BRIC - Microgrid Scoping Project	Multiple	HMPG grant	In progress
PCA Fire Hardening	Fire	HMPG grant	In progress
Undergrounding 4kV lines in UARP	Wildfire	Electrical rates	Complete
Storm Preparation Work	Severe weather	Electrical rates	On going
Install non-expulsion devices in PCA	Wildfire	Electrical rates	On going
UARP 4kV circuit breakers will be upgraded to allow remote de-energization of lines.	Wildfire	Electrical rates	Complete
Replace #6 copper conductors with heavier gauge aluminum.	Wildfire	Electrical rates	Complete
Upgrade existing 12kV feeders to SCADA reclosers in PCA	Wildfire	Electrical rates	In progress
Strengthen fire break valve via UARP fuels reduction	Wildfire	Electrical rates	On going
Visual and Infrared (IR) inspections on substation equipment	Wildfire tree mortality	Electrical rates	On going
Continuous assessment and mitigation	All hazards	Electrical rates	On going
Sacramento Resilient Grid Initiative	Energy shortage	REDI grant	Complete

21.1.2 Status of Plan Incorporation Actions

SMUD’s Enterprise Prioritization process helps to ensure alignment across SMUD, focused on delivering the things that are most important to the organization, customers, and community. This includes the evaluation, assessment, and prioritization of work to meet SMUD’s key strategic and operational business goals, strategic portfolio management, and facilitation of Executive investment decisions.

21.2 Plan Prioritization

21.2.1 Benefit/Cost Review

Initiatives within the action plan must be prioritized according to a benefit/cost analysis (44 C.F.R. § 201.6(c)(3)(iii)). Projects and initiatives that address hazard mitigation will follow SMUD's current Enterprise Prioritization Process

SMUD's Enterprise Prioritization scoring methodology consists of 4 components – Strategic Alignment, Risk, Business Unit Criticality, and Financials. Our Strategic Alignment component encompasses the benefit to the organization and strategy of completing the work. SMUD leverages a weighted scoring methodology, with the individual weighting of each component to be determined annually based on the current environment SMUD is facing for the upcoming year. Typically, the strategic alignment and risk components are more heavily weighted than the other components.

The financial score will only consider costs and financial savings or revenue that will be reflected in SMUD's budget. Cost savings to customers or risk-based cost calculations are not included. The score requires a calculation of net present value, which is today's value of expected cash flows minus today's value of invested cash. Present value of lifetime cost minus present value of lifetime benefit.

21.2.2 Grant Pursuit Priority

The priority for pursuing funding for each action was assigned based on the following criteria:

- **High priority** – An action that
 - meets identified grant eligibility requirements,
 - has high benefits,
 - is a prioritized via Enterprise Prioritization, and
 - local funding options are unavailable, limited, or available local funds could be used instead for actions that are not eligible for grant funding.
- **Medium priority** – An action that
 - meets identified grant eligibility requirements,
 - has medium or low benefits,
 - is prioritized via Enterprise Prioritization, and
 - local funding options are unavailable, limited, or available local funds could be used instead for actions that are not eligible for grant funding.
- **Low priority** – An action that
 - has not been identified as meeting any grant eligibility requirements.

21.3 Mitigation Actions Implementation Plan

The following table depicts current mitigation actions.

Table 65: Mitigation Actions Implementation						
Hazard	Title	Priority	Owner	Possible Funding Source	Description	Status
All hazards	Capital Region Climate Readiness Collaborative (CRCRC)	High	Research and Dev.	Electrical rates	SMUD continues to participate in the CRCRC to develop and grow its memberships to identify solutions for regional impacts of climate change.	On going
Fire	Wildland Fire Mitigation through Fuels Reduction - Sacramento	High	Vegetation Mgmt.	HMPG Grant	Vegetation clearance in SMUD's Pole Clearing Area	Awaiting FEMA response
Energy shortage	AB327/More than SmartGrid Modernization Research	High	Distribution Operations and Main.	Electrical rates; grants	This broadens distribution planning efforts to consider DER alternatives when cost effective in comparison to traditional projects and includes distribution infrastructure deferral demonstrations using DER.	2018-2020
Fire	Community Education	High	SMUD	Electrical rates	Continue to educate private property owners about the dangers of vegetation near distribution lines and service drops.	On going

Table 65: Mitigation Actions Implementation

Hazard	Title	Priority	Owner	Possible Funding Source	Description	Status
Flood hazards; Dam safety	Dam Safety Project	High	Power Gen.	Electrical rates	Two primary activities: (1) a Dam Potential Failure Mode Analysis, and (2) an independent consultant assessment.	2018
Severe storms	UARP Culvert Replacement Project	High	Power Gen.	Electrical rates; grant funding	Upsize or replace culverts in UARP.	On going
Flood	FEMA HMGP Advance Assistance for Flood Study	Medium	Substation Assets	HMPG Grant	Conduct an inundation study for substations	Awaiting FEMA response
Flood	FEMA HMGP Advance Assist. for Gas Pipeline Engineering Study	Medium	Gas Pipeline	HMPG Grant	Conduct inundation study for gas pipelines	Awaiting FEMA response
All hazards	Focused Climate Research	Medium	Research and Dev.	Electrical rates	Staff participation in California’s Fourth Climate Assessment, which produces regional reports for the first time, and Governor’s Integrated Climate Adaptation and Resiliency Program (I-CARP) Technical Advisory Council to maintain awareness of the latest peer-reviewed research findings.	On going

Table 65: Mitigation Actions Implementation

Hazard	Title	Priority	Owner	Possible Funding Source	Description	Status
All hazards	SMUD Nature Preserve Mitigation Bank	Medium	Env. Services	Electrical rates	SMUD continues to monitor a multi-species/ multi-habitat mitigation bank that provides for long-term protection of special status species and habitats found within SMUD's service territory.	On going
Extreme heat	SMUD Cool Roof Incentive	Medium	Customer	Electrical rates	Incentive programs for SMUD customers.	On going
Fire hazards; Tree mortality; Energy shortage	Forest Thinning, Stream, and Revenue Flows and UARP	Medium	Vegetation Mgmt.	Electrical rates; grants	This work is to improve the safety of mountain communities expand water resources and reduce smoke and air quality impacts associated with catastrophic wildfires. There is a proposed ten-year study to better understand the long-term impact of potential changes in forest management practices.	On going

Table 65: Mitigation Actions Implementation

Hazard	Title	Priority	Owner	Possible Funding Source	Description	Status
Fire; Tree mortality	Wildland Fire Mitigation through Fuels Reduction for Sacramento and El Dorado County	Medium	Vegetation Mgmt.	Electrical rates; grant funding	Fuel reduction treatments including thinning, brushing, removal of forest slash and mastication along the full extent of the project corridors.	On going
Flood hazards	Flood Data Climate Exposure Evaluation	Medium	Grid Assets	Electrical rates	SMUD is conducting a levee breach study to identify assets likely to be affected by several breach scenarios updated in the last year by the City and County of Sacramento.	On going
Severe storms	Public Outreach	Medium	SMUD	Electrical rates	Encourage critical facilities in the SMUD plan area to have backup power and emergency operations plans to deal with power outages.	On going
Tree mortality; Extreme heat; Energy shortage	SMUD Shade Tree Program	Medium	Customer	Electrical rates	Program encouraging residents to strategically plant shade trees around their home to reduce energy consumption.	On going

Table 65: Mitigation Actions Implementation

Hazard	Title	Priority	Owner	Possible Funding Source	Description	Status
All hazards	Regional Bio sequestration	Medium	Research and Dev.	Electrical rates; private investors	Public-private partnerships (with land trusts, open space conservatives or private landowners) to leverage carbon offset protocols and create new revenue streams and other incentives to preserve and expand land-based carbon storage.	On going
Earthquake	Seismic Vulnerability	Low	SMUD	Electrical rates; grants	Consider seismic vulnerability assessments and develop mitigation strategies for seismic retrofit of critical utility infrastructure identified as particularly vulnerable.	On going
Fire; Severe storms	Systems Upgrade	Low	Grid Assets	Electrical rates; grant	Where appropriate, upgrade lines and poles to improve wind loading, and add interconnect switches to allow alternative feed paths and disconnect switches to minimize outage areas.	On going

Table 65: Mitigation Actions Implementation

Hazard	Title	Priority	Owner	Possible Funding Source	Description	Status
All hazards	Other	Medium/ High	SMUD	Electrical rates; grants	Other hazard mitigation plans identified through annual planning process	On going

Part 4

Plan Maintenance

22.0 Plan Adoption, Implementation and Maintenance

22.1 Plan Adoption

SMUD operates under the oversight and guidance of its Board of Directors. SMUD's 2018 HMP was adopted by SMUD's Board of Directors on June 24, 2019. As part of the process of updating and implementing the 2024-2028 HMP Update, a preliminary version of this plan was presented to the Board of Directors on (Date) at the (Name of Committee Meeting). Following input from the Board, the HMP was then submitted to Cal OES and ultimately to FEMA for review and acceptance.

Within approximately eight weeks of FEMA's pre-approval of the HMP, the final plan will be presented to SMUD's Board of Directors during a regularly scheduled meeting for formal adoption.

22.2 Plan Implementation

The effectiveness of the HMP depends on the implementation and incorporation of its action items into existing planning processes. This HMP will serve to support SMUD's decision-making process in the next 5-years. The mitigation activities will be prioritized according to SMUD's budget and planning process.

22.3 Plan Maintenance

22.3.1 Integration with Other Planning Processes

The mitigation activities within the HMP will follow SMUD's Enterprise Prioritization process as outlined in section 21.3.1. Benefits/Cost Review.

22.3.2 Plan Evaluation and Monitoring

Evaluation of progress will be recognized by monitoring changes in the hazard risk-potentials that have been identified previously in the HMP. Changes in risk-potential can be denoted as:

- Increased hazard risk-potential because of a new development.⁹⁷
- Increased hazard risk-potential because of a changed mitigation strategy.
- Decreased hazard risk-potential because of the success of a mitigation strategy.

Updates to the HMP will include the above changes in risk-potential as well as:

- Recognizing new hazards that arise in SMUD's Plan Area.
- Utilizing new data or studies on current and/or future hazards.
- Incorporating new capabilities in mitigating specific hazards.
- Incorporating newly acquired assets and all growth and development of current infrastructure.

⁹⁷ Be it naturally occurring, or human caused.

Updates to the HMP will also be made to accommodate actions that have failed or are not considered feasible after a review of their consistency with the established progress markers.

22.3.3 Plan Update Method and Schedule

SMUD will update the HMP, formally, every five years. The update process will begin in the 3–4-year period to give sufficient time for stakeholder engagement and evaluation of actions. Additionally, SMUD will be tracking the mitigation efforts through its existing business processes. Mitigations will be reviewed during the annual prioritization process and periodic enterprise risk reviews. Progress of any hazard mitigation projects will be tracked through the existing project management reporting process. Updates during these processes will be integrated into the plan as appropriate. The updates will be reviewed by the PC periodically and finalized during the 3–4-year review period. Maintenance of the HMP will be conducted in accordance with DMA 2000.

The ERMO is responsible for initiating plan maintenance, and tracking status updates of installed mitigation efforts and changing threats in SMUD’s Plan Area. Following a hazard event triggering SMUD’s Emergency Operation Center (EOC), the ERMO will revisit the plan to ensure mitigation strategies are being implemented as stated and to discuss possible future changes to the HMP. The next formal plan update for the SMUD HMP will occur five years from the date that this HMP is approved by Cal OES and FEMA.

22.4 Continuing Public Involvement

The draft HMP and final approved HMP will remain available to the public on the HMP website. The public can continue to provide comments on the HMP directly to ERM@smud.org and during public Board and Committee meetings. Any public input will be incorporated into the next formal HMP update process.

22.5 Mitigation Plan Point of Contact

Toni Hoang,	Enterprise Risk Manager
Mailing address:	6301 S Street, Sacramento, CA 95817
Telephone:	(916) 732-6532
E-mail:	toni.hoang@smud.org

Table 66: Table of Acronyms

Acronym	Definition	Acronym	Definition
Cal OES	California Governor’s Office of Emergency Services	USFS	United States Forest Service
FEMA	Federal Emergency Management Agency	BLM	Bureau of Land Management
SMUD	Sacramento Municipal Utility District	CalFire	California Department of Forestry and Fire Protection
HMGP	Hazard Mitigation Grant Program	kWh	Kilowatt hours
PDM	Pre-Disaster Mitigation Assistance Program	MW	Megawatts
FMA	Flood Mitigation Assistance Program	kV	Kilovolt
FMAG	Fire Management Assistance Grant	SD	Strategic Directions
PA	Public Assistance	GHG	Greenhouse gas
DMA 2000	Federal Disaster Mitigation Action of 2000	GW	Gigawatt hour
Annexation Plan	El Dorado County LHMP Annex	cfs	Cubic feet per second
MJ-LHMP	Multi-jurisdictional Local Hazard Mitigation Plan	ft.	Feet
LHMP	Local hazard mitigation plan	ac-ft.	Acre feet
HMPC	Hazard Mitigation Planning Committee	PG&E	Pacific Gas and Electric Company
EROC	Enterprise Risk Oversight Committee	WTG	Wind turbine generators
CUEA	California Utilities Emergency Association	SRCS	Sacramento County Sanitation District
SOC	State Operations Center	SFA	SMUD Financing Authority (Cosumnes Power Plant)
MOU	Memorandum of understanding	CVFA	Central Valley Financing Authority (Carson Cogeneration Project)
UOC	Utility Operations Center	SCA	Sacramento Cogeneration Authority (Procter & Gamble Cogeneration Project)
REOC	Regional Emergency Operations Center	SPA Project	Sacramento Power Authority (Campbell Soup Cogeneration Project)
SEMS	Standardized Emergency Management System	SPA McClellan	Sacramento Power Authority (McClellan Gas Turbine)

Table 66: Table of Acronyms

Acronym	Definition	Acronym	Definition
CRC	Capital Region Climate Readiness Collaborative	WAPA	Western Area Power Administration
EDCFSC	El Dorado County Fire Safe Council	Dth	Dekatherm
FFSC	Folsom Fire Safe Council	COTP	California Oregon Transmission Project
NATF	North American Transmission Forum	COI	California-Oregon Intertie
CPUC	California Public Utility Commission	TANC	Transmission Agency of Northern California
PDP	Peer Development Panel	UCS	Union of Concerned Scientists
UARP	Upper American River Project	FPRP	Fire Prevention and Response Plan
EAP	Emergency Action Plan		
FERC	Federal Energy Regulatory Commission	IOU	Investor-owned utilities
GPO	Gas pipeline operations	UAS	Unmanned aerial systems
NCDC	National Climatic Data Center	FIS	Geographic Information Systems
SAFCA	Sacramento Area Flood Control Agency	EOC	Emergency Operation Center
in,	Inch	SRA	State responsibility area
FIRM	Flood Insurance Rate Map	FR3	Fire retardant insulating fluid
USGS	United States Geological Survey	IR	Infrared Information System
DOE	Department of Energy	NWS	National Weather Service
TACs	Toxic air contaminants	mph	Miles per hour
NIDI	National Integrated Drought	ISFSI	Independent Spent Fuel Storage Installation
SAR	Safety Analysis Report	ERM	Enterprise Risk Management
ERMO	Enterprise Risk Management Office		



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RESOLUTION NO. 24-02-06

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board accepts the monitoring report for **Strategic Direction SD-2, Competitive Rates**, substantially in the form set forth in **Attachment E** hereto and made a part hereof.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

SACRAMENTO MUNICIPAL UTILITY DISTRICT

OFFICE MEMORANDUM

TO: Board of Directors

DATE: January 24, 2024

FROM: Claire Rogers *CR 1/24/24*

SUBJECT: Audit Report No. 28007740
Board Monitoring Report; SD-02: Competitive Rates

Internal Audit Services (IAS) received the SD-02 *Competitive Rates* 2023 Annual Board Monitoring Report and performed the following:

- Selected a sample of statements and assertions in the report for review.
- Interviewed report contributors and verified the methodology used to prepare the statements in our sample.
- Validated the reasonableness of the statements in our sample based on the data or other support provided to us.

During the review, nothing came to IAS' attention that would suggest the items sampled within the SD Board Monitoring report did not fairly represent the source data available at the time of the review.

CC:

Paul Lau

Board Monitoring Report 2023

SD-2, Competitive Rates



1. Background

Strategic Direction 2, Competitive Rates states that:

Maintaining competitive rates is a core value of SMUD.

Therefore:

- a) The Board establishes a rate target of 18 percent below Pacific Gas & Electric Company's published rates on a system average basis. In addition, the Board establishes a rate target of at least 10 percent below PG&E's published rates for each customer class.
- b) SMUD's rates shall be competitive with other local utilities on a system average basis.
- c) In addition, SMUD's rates shall be designed to balance and achieve the following goals:
 - i) Reflect the cost of energy when it is used or exported to the SMUD grid;
 - ii) Reduce consumption during periods of high system demand;
 - iii) Encourage energy efficiency, conservation, and carbon reduction;
 - iv) Encourage cost effective and environmentally beneficial Distributed Energy Resources (DERs) (examples of DERs include but are not limited to rooftop solar, battery storage, and energy reduction applications);
 - v) Minimize the rate of change in the transition from one rate design to another;
 - vi) Provide customers flexibility and choices;
 - vii) Be as simple and easy to understand as possible;
 - viii) Address the needs of people with low incomes and severe medical conditions; and
 - ix) Equitably allocate costs across and within customer classes.

2. Executive summary

a) SMUD is in compliance with SD-2, Competitive Rates.

As of December 31, 2023, SMUD's rates remain among the lowest in the state and on a system average rate basis are 50.1% below Pacific Gas & Electric (PG&E) Company's, which is better than the SD-2 target of at least 18% below on a system average rate basis. Residential average rates are at least 46.8% below PG&E's residential average rates. See Figure 1 below for details.

There was one rate increase to SMUD's rates in 2023. Rates for all customers were increased by 2% on January 1, 2023, as adopted by the Board on September 16, 2021. The overall rate advantage between SMUD and PG&E remains well above the SD-2 target of at least 18% on a system average basis.

Metric	2023 performance	2022 performance	5-year average
System average rates 18% below PG&E rates	50.1% below PG&E on a system average rate basis	45.5% below PG&E on a system average rate basis	40.9% below PG&E on a system average rate basis

2023 marked the continuation of several rate developments that balance the SD-2 requirements and help SMUD maintain our critical financial performance and metrics. In September, the Board approved Rate Resolution 23-09-09 which will allow SMUD to continue to meet California mandates, while addressing the impacts of the current economy and inflation. Despite these rate changes SMUD anticipates continuing to meet SD2 requirements in the future.

In September 2023 the board approved four 2.75% rate increases through 2025 with the first rate increase going into effect on January 1, 2024. These approved increases are, on average, lower than those of other electric utilities in the state of California. These increases are driven by commodity price increases, compliance requirements and inflation, among other things as described in Section 4 below.

The 2023 Rate Process also established the EAPR Stabilization Fund, which will provide an additional discount to those low-income customers that are in the greatest need. The fund will be maintained on an annual basis using discretionary, non-retail rate revenue, as to not have an impact on any future required rate changes.

The Time-of-Day (TOD) rate continues to encourage residential customers to shift usage out of the 5 p.m. to 8 p.m. peak time-period. On average, TOD rates deliver approximately 86-126MW of reduced load during SMUD’s system peak.

3) Additional supporting information

a) The Board establishes a rate target of 18% below PG&E’s published rates on a system average basis. In addition, the Board establishes a rate target of at least 10% below PG&E’s published rates for each customer class.

SMUD continues to maintain average rates that are lower than PG&E’s, both at a system level and by rate class. Figure 1 provides a detailed picture of the difference between SMUD’s and PG&E’s average rates by rate class in 2023 as well as the difference between rates in 2022.

Figure 1 – Summary of SMUD and PG&E Rate Comparison in \$/kWh

Customer		Rate Categories		Average Annual Rate		Difference Below PG&E*	Difference Below PG&E*	Difference Above SMUD
				PG&E	SMUD			
Class	Description	PG&E	SMUD	2023	2023	2023	2022	2023
Residential	Standard	E-1	TOD	\$0.3822	\$0.1796	-53.0%	-48.0%	112.8%
	Low Income	CARE***	EAPR & EAPRMED**	\$0.2437	\$0.1253	-48.6%	-42.0%	94.4%
All Residential				\$0.3215	\$0.1710	-46.8%	-42.9%	88.1%
Small Commercial****	<= 20 kW	B-1	GFN, CITS-0	\$0.3636	\$0.1739	-52.2%	-47.7%	109.1%
	21 - 299 kW	B-6	CITS-1	\$0.3570	\$0.1607	-55.0%	-49.1%	122.2%
Medium Commercial****	300 - 499 kW	B-10	CITS-2, CITP-2	\$0.3391	\$0.1501	-55.7%	-51.6%	125.9%
	500 - 999 kW	B-19	CITS-3, CITP-3, CITT-3	\$0.2929	\$0.1408	-51.9%	-47.6%	108.1%
Large Commercial****	=> 1 MW	B-20	CITS-4, CITP-4, CITT-4	\$0.2303	\$0.1203	-47.8%	-44.4%	91.4%
Lighting	Traffic Signals	TC-1	TS	\$0.3578	\$0.1377	-61.5%	-57.6%	159.8%
	Street Lighting	various	SLS,NLGT	\$0.4830	\$0.1564	-67.6%	-58.6%	208.9%
Agriculture	Ag & Pumping	AG	ASN/D,AON/D	\$0.3307	\$0.1525	-53.9%	-48.6%	116.8%
System Average				\$0.3133	\$0.1565	-50.1%	-45.5%	100.3%

Notes:

* Projected 2023 average prices for SMUD with rates effective 1-1-23. PG&E average prices in 2023 reflect rates effective 9-1-23, per Advice Letter 7009-E. The rate difference in year 2022 reflects PG&E average rates as of 6-1-22, per Advice Letter 6603-E dated 5-20-22, and SMUD rates effective 3-1-22.

** CARE vs EAPR includes EAPR & EAPRMED customers.

*** There is no indication from PG&E that their CARE rates include customers who have a medical allowance only.

**** Commercial rates include WAPA credits.

As seen in Figure 1, the rate competitiveness by class varies for the different customer classes and is at least 46.8% below comparable PG&E class average rates. Since the creation of this annual monitoring report, SMUD has consistently maintained rates that were more than 18% below PG&E. See Appendix A for more details.

b) SMUD's rates shall be competitive with other local utilities on a system average basis.

SMUD's system average rate is competitive with other local utilities as shown in detail in Appendix B. In general, we are seeing large rate increases across the other local utilities. Even with our approved rate increases in 2024 and 2025, SMUD's rates remain competitive. For example, Modesto recently approved a two-year rate increase of approximately 13% for 2024 and 2025; that's in addition to an already adopted cumulative rate increase of 10.5% for 2023 and 2024. Roseville Electric is in the middle of proposing 2 rate increases of 9% each for 2024 and 2025. PG&E rates went up by 13% in 2023 alone, with a separate 17% rate increase effective January 2024.

c) Reflect the cost of energy when it is used or exported to the SMUD grid

SMUD's TOD and restructured commercial rates were designed to more closely reflect the cost of energy when it is used, with prices highest during the peak time periods when the cost of energy is highest. We continually assess our rates as markets and our costs change to determine if any structural changes are needed. For example, we implemented TOD rates in 2018 and restructured our commercial rates in 2021.

d) Reduce consumption during periods of high system demand

Both the residential and commercial TOD rates send signals to customers to reduce their on-peak usage. The Peak time for residential customers is 5 p.m. to 8 p.m. while the Peak time for commercial customers under the restructured rates is 4 p.m. to 9 p.m. These Peak time periods reflect the highest \$/kWh to encourage customers to shift their energy usage outside of the Peak time-period to reduce system load and help with carbon reduction goals.

The optional residential Critical Peak Pricing (CPP) rate charges a premium on energy delivered during those few critical times during the summer with highest demand, which is expected to reduce energy consumption and carbon emissions when the grid is most stressed. Additionally, customers on the CPP rate receive a discount on energy delivered during the summer Off-Peak and Mid-Peak time periods, encouraging them to shift their energy use to times when the grid is less stressed and clean energy is more abundant.

e) Encourage energy efficiency, conservation, and carbon reduction

SMUD continues to encourage energy efficiency, conservation and carbon reduction through the residential and non-residential TOD rates and a variety of programs, such as incentives to install storage, and offering a variety of rebates for energy-efficient appliances, heating and cooling systems, and energy-efficient LED lighting. TOD rates encourage

customers to shift energy use from peak times when energy is more costly and is produced by a larger portion of carbon-emitting generation plants to off-peak times, when there is often excess carbon-free solar generation on our system. By shifting usage to times when non-carbon emitting resources are plentiful, customers not only save money, but they also contribute to reducing carbon emissions and help SMUD achieve our carbon reduction goals. The residential and restructured commercial TOD rates were designed to be revenue neutral, so customers can save money if they shift or reduce their usage from peak hours. More detailed information about rebates and savings tips can be found on smud.org.

f) Encourage cost effective and environmentally beneficial Distributed Energy Resources (DERs) (examples of DERs include but are not limited to rooftop solar, battery storage, and energy reduction applications)

The Solar and Storage Rate (SSR) was designed to work with a series of programs and incentives to help SMUD reach its 2030 Zero Carbon Plan. SMUD started the My Energy Optimizer (MEO) incentives and expanded storage incentives to encourage customers to invest in storage, which could enable the customer to gain additional value from their investment. In addition to the storage incentives, the CPP rate provides customers with solar and storage even more of an opportunity to increase the value of their system, by providing a significantly larger incentive to send power to the grid during critical events. The CPP rate also encourage customers to adopt smart thermostats, as they may be able to save money on the CPP rate if they use the thermostats to adjust their energy usage.

Customers that live in low-income, multi-family affordable housing will be able to receive the benefits of solar through the Virtual Solar option. In the Virtual Solar option, the building owner may install solar, and the benefits of that solar will be allocated to the residents, providing an avenue for customers to adopt solar even though they do not own their own home.

g) Minimize the rate of change in the transition from one rate design to another

SMUD follows this principle through gradualism and balance between rate implementation and customer satisfaction when making rate structure changes in combination with rate increases. For example, the Commercial Rate Restructure will be phased in over an 8-year period to mitigate bill impacts.

h) Provide customers flexibility and choices

SMUD provides flexibility and rate options to its customers. Residential customers may select custom due dates, budget billing, and net energy metering customers can choose between monthly or annual settlement options. Residential customers are placed on TOD, but they may select the fixed rate or the CPP rate. All customers may make online payments and set up billing alerts. In addition, qualified commercial customers moving to SMUD's service area may choose between two different Economic Development Rate discount structures, selecting the option that best suits their needs.

SMUD is offering three levels of incentives for customers to install storage. The amount of the incentive increases depending on which programs the customers decide to participate in. The smallest incentive, MEO Starter, is for customers that do not wish to participate in a program, the next highest level, MEO Partner, is for customers that want to participate in the CPP rate, and the highest incentive, MEO Partner+, is for customers that want to participate

in the Virtual Power Plant program. Detailed information about storage incentives can be found on smud.org.

i) Be as simple and easy to understand as possible

SMUD works to make sure its many programs and rates are simple and easy to understand. For example, staff designed the TOD rate and restructured commercial rates to balance simplicity while still reflecting the cost of energy when it is used. Ongoing customer outreach and education assists customers in understanding new rate designs, pilots and programs.

j) Address the needs of people with low incomes and severe medical conditions

SMUD continues to address low-income customers and those with medical conditions. The Energy Assistance Program Rate (EAPR) and our Medical Equipment Discount Rate (MED Rate) offer customers a discount on their monthly energy costs for those that qualify. The discount for EAPR is determined by Federal Poverty Level (FPL) with the largest discount going to those that need the most assistance. In September 2023, the Board approved the EAPR Rate Stabilization Fund which gives an additional discount to those customers with the greatest need, using discretionary, non-retail funds.

Additionally, through the EAPR and MED Rate discount program we have assisted nearly 2,000 customers with energy education, energy efficient improvements and repairs, and moved them towards our Clean Energy Vision with building and transportation electrification improvements. These programs improve/reduce their overall energy burden and increase the comfort of their homes.

k) Equitably allocate costs across and within customer classes

To ensure costs are equitably allocated across and within customer classes, staff updates SMUD's marginal cost study and performs rate costing studies and value of solar studies prior to recommending rate structure changes, such as with TOD, the Commercial Rate Restructure and SSR.

4) Challenges

Rate Pressures

SMUD continues to face cost pressures for compliance and risk mitigation requirements, as well as technology and grid investments to support the safe and reliable operation of the grid. Commodity costs to meet our reliability Renewable Portfolio Standards requirements are increased by \$87 million in 2024, along with an increase of \$370 million of capital spending to fund new generation, storage projects, substation and line capacity projects in 2024 and 2025. In addition, increased costs for wildfire management, reliability of our hydro facilities, customer programs to support our clean energy vision, and inflation all added pressure to maintaining SMUD's bottom line. These rate pressures were the drivers and detailed in the 2023 GM Report.

5) Recommendation

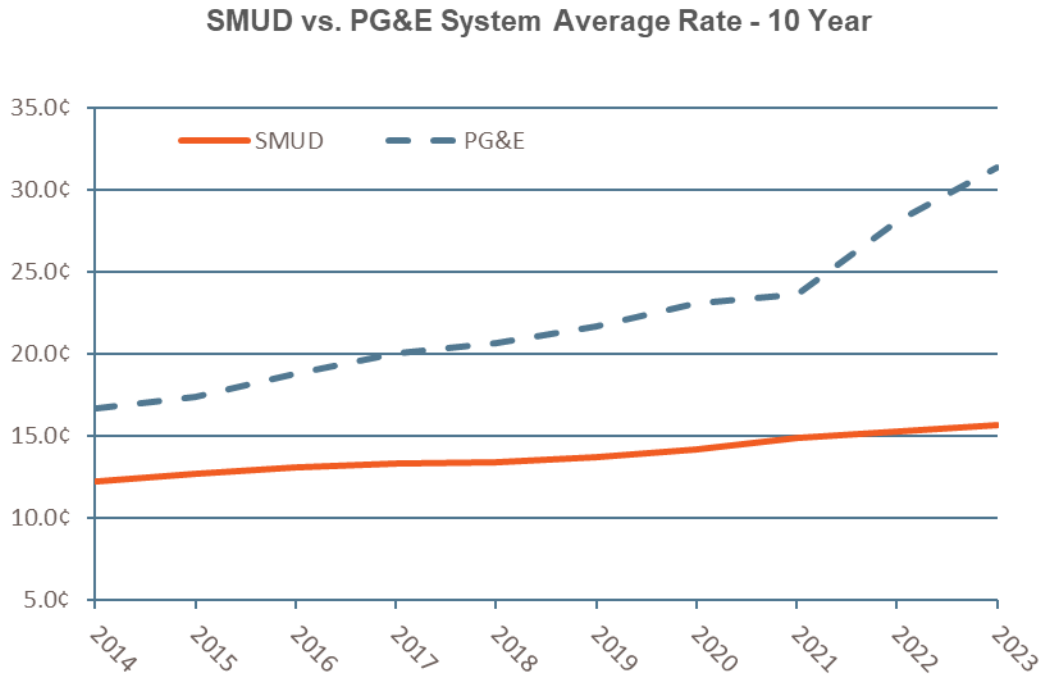
It is recommended that the Board accept the Monitoring Report for SD 2, Competitive Rates.

Appendices

Appendix A: Historical Rate Comparison with PG&E

Figure 2 compares SMUD and PG&E's system average rates for the past 10 years. SMUD's system average rates have averaged 36.1% below PG&E's since 2014.

Figure 2 – SMUD and PG&E Historical System Average Rate Comparison



Appendix B: Local Utility Rates

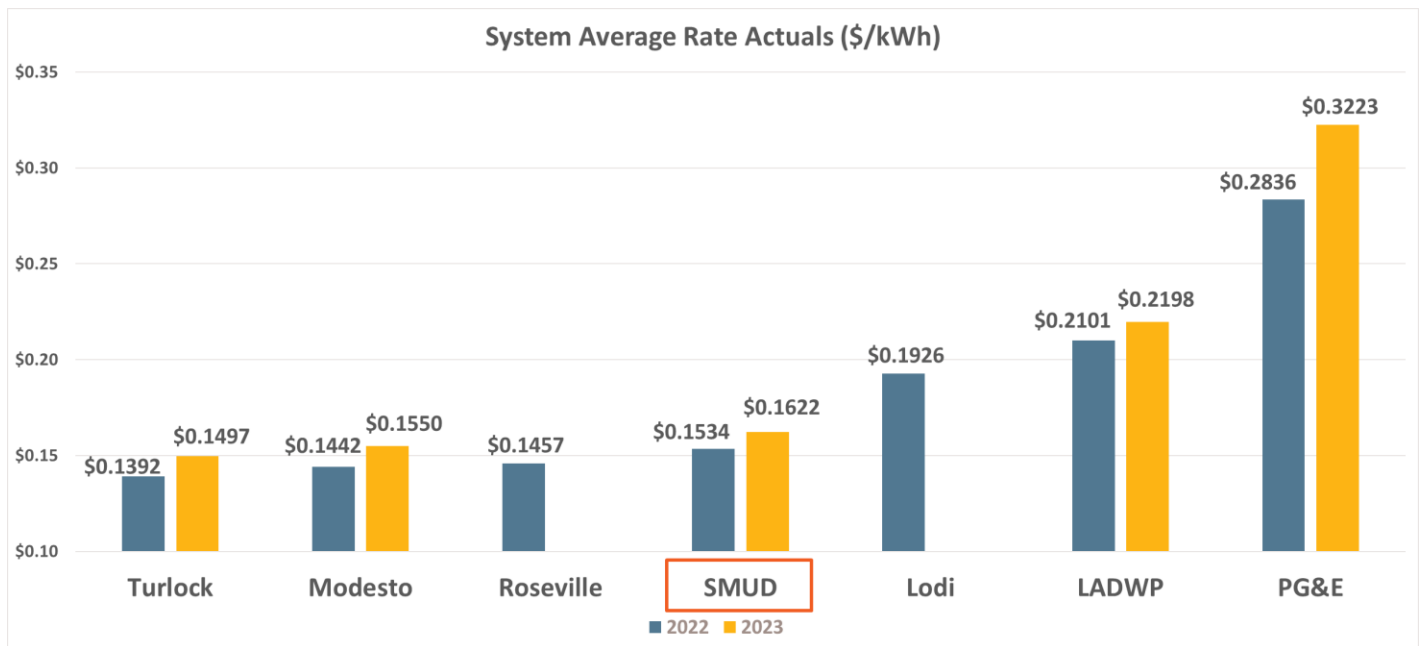
- **Modesto Irrigation District (MID):** On November 15, 2022, MID approved rate increases of 7.4% effective January 2023 and an additional 3.5% for 2024. On November 14, 2023, the MID Board of Directors approved another round of rate increases of 7.5% for January 2024, and a subsequent 5.5% increase for 2025 to cover costs and power supply cost pressure. A Power Cost Adjustment designed to reflect fluctuating power supply costs was also adopted and will be calculated and applied monthly to customer bills in 2025.
- **Turlock Irrigation District (TID):** TID has not had a base rate increase since 2015 and there is no indication the utility plans to modify its base rates in 2024. There is no change planned to the Power Supply Adjustment at the moment.
- **Roseville Electric:** Roseville Electric has scheduled three public rate workshops in January 2024 to explain the need of additional rate increases for 2024 and 2025, however they will continue their 8% energy surcharge through December 31, 2024. The utility states that the need for new rate increases is due to several factors, including

skyrocketing fuel prices, increased operating costs including materials and labor, renewable energy compliance regulations, and a loss of revenue from the state. The proposal includes two rate increases of 9% each for 2024 and 2025 and add the 8% energy surcharge to the base rates to make it permanent.

- **Lodi Electric:** On June 7, 2023, the Lodi City Council adopted a rate increase of 2% effective August 2023 for fiscal year 2023-24 and 2% effective July 2024 for fiscal year 2024-25. The staff report describes that the additional needed revenue is being collected through an increase to the monthly customer charge which is intended to cover the fixed costs of the utility – those costs that do not change based on the amount of energy. Lodi also has a monthly energy cost adjustment that adjusts as power costs increase or decrease. The range of the energy cost adjustment for 2023 was $-\$0.0377/\text{kWh}$ to $\$0.0671/\text{kWh}$.
- **Los Angeles Department of Water and Power (LADWP).** LADWP did not have a base rate increase in fiscal year 2022-2023. LADWP does have a pass-through rate mechanism that adjusts quarterly with costs, outside of any base rate increases. This Energy Cost Adjustment (ECA) ranged between $\$0.10213$ and $\$0.10369$ for 2023.

SMUD’s system average rate remains competitive, as shown in Figure 3. Figure 3 uses 2022 data from the U.S. Energy Information Administration (EIA), which is the most recent actual yearly data available. 2023 values are based on averaged monthly figures through October 2023. Roseville and Lodi do not participate in the reporting of monthly data. System average rates in dollars per kWh is a typical benchmark used in the industry to compare rates and are calculated by taking total electric revenue and dividing it by total kWh retail sales.

Figure 3 – 2022 Utility System Average Rate Comparison (\$/kWh)



Including pass-through mechanisms in rates is a common utility practice, allowing utilities to collect enough revenue to cover their costs without having to increase rates in a formal rate proceeding. SMUD has the Hydro Generation Adjustment, which allows for a small additional

charge on customer bills in the event of less than median precipitation. Any pass-through mechanisms that utilities have are included in Figure 3. Figure 4 details the pass-through mechanisms some of SMUD’s neighboring utilities have as part of their rate structures.

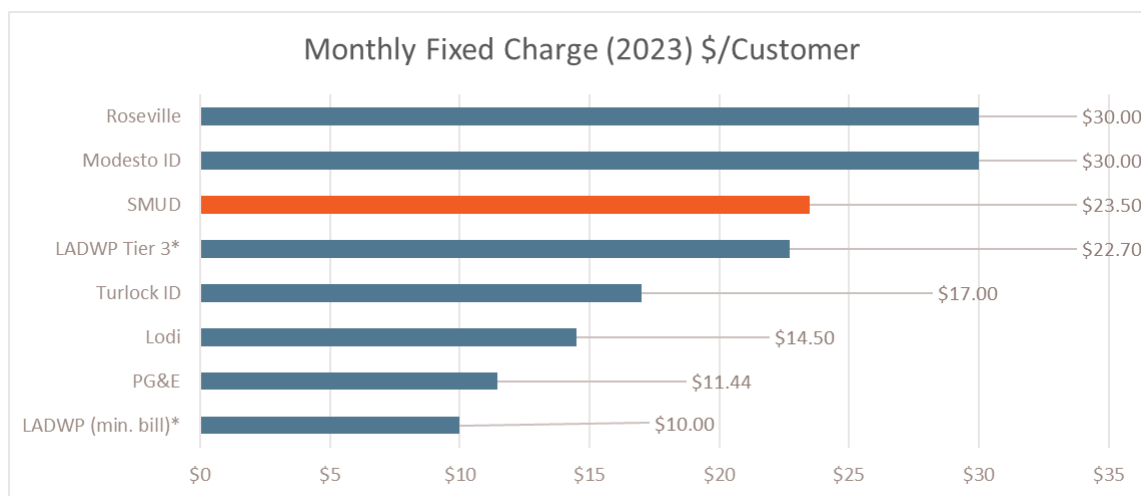
Figure 4 – Utility Pass-through Mechanisms

Utility	Pass-through
SMUD	Hydroelectric Generation Adjustment
Modesto Irrigation District	Capital Infrastructure Adjustment
	Environmental Energy Adjustment
	Power Cost Adjustment*
Turlock Irrigation District	Power Supply Adjustment
	Environmental Charge
	Public Benefits Surcharge
Roseville Electric	Renewable Energy Surcharge
	Greenhouse Gas Surcharge
	Hydroelectric Adjustment
Lodi Electric	Energy Cost Adjustment
LADWP**	Energy Cost Adjustment
	Electric Subsidy Adjustment
	Reliability Cost Adjustment

* Modesto’s Power Cost Adjustment (PCA) will be in effect starting January 1, 2025.
 * LADWP has other adjustments to reflect approved rate increases.

Including a fixed charge amount on residential customers bills is also a common utility practice. The fixed charge allows for revenue collection for fixed assets that do not vary with electricity consumption. Figure 5 below outlines the fixed charge amount of SMUD’s neighboring utilities.

Figure 5 – Monthly Residential Fixed Charge Amount



* Roseville Electric increased their customer charge to \$30 in 2023.
 ** LADWP’s Tier 1 fixed charge is \$2.30 and Tier 2 fixed charge is \$7.90 but they have a minimum bill of \$10 per month.
 *** Modesto ID’s customer charge increased to \$30 in 2023

Appendix C: PG&E Updates

Overview of PG&E’s recent rate proceedings

In 2023 PG&E had five rate changes, increasing the system average rate in \$/kWh from \$0.2803 in 2022 to \$0.3133 in 2023 as shown in Figure 6.

Figure 6 – PG&E 2022-2023 Rate Changes

	PG&E Rate Changes in 2022			Annual	PG&E Rate Changes in 2023					Annual
	January	March	June	2022	January	March	June	July	September	2023
Rate Change (%)	7.50%	10.50%	1.00%	19.98%	3.30%	4.40%	-1.80%	5.30%	1.50%	13.19%
System Rate (\$/kWh)*	\$0.2514	\$0.2776	\$0.2803		\$0.2858	\$0.2983	\$0.2931	0.3087	\$ 0.3133	

*Includes California Climate Credit

PG&E Rate Increase Process

Every three to four years PG&E files a request with California Public Utilities Commission (CPUC) with their proposed rate increases. Per the most recent filing dated 12/29/2023, which reflects the true-up and General Rate Case (GRC), PG&E will increase its rates by 17.1% on average effective January 1, 2024.

For 2024, most of the increase is driven by the GRC which supports the continued implementation of the utility’s wildfire mitigation plan, a large portion of which is “undergrounding” 1,230+ miles of lines where wildfire risk is high. Other driving factors include the need to meet growing energy demand and the addition of more renewables.

PG&E is awaiting a decision from the CPUC on their proposed Income-Graduated Fixed Charge, expected sometime in 2024.

Figures 7 and 8 show the comparison to PG&E rates for each step of SMUD’s rate increases in 2024. The charts show that even with the increases, the difference between PG&E’s and SMUD’s rates still far exceed the directive of SD-2.

Figure 7 – Summary of SMUD and PG&E Rate Comparison in \$/kWh (January 1, 2024 Rates)

Customer		Rate Categories		Average Annual Rate		Difference	Difference	Difference
				PG&E	SMUD	Below PG&E*	Below PG&E*	Above SMUD
Class	Description	PG&E	SMUD	2024	2024	2024	2023	2024
Residential	Standard	E-1	TOD	\$0.4467	\$0.1855	-58.5%	-53.0%	140.8%
	Low Income	CARE***	EAPR & EAPRMED**	\$0.2831	\$0.1285	-54.6%	-48.6%	120.4%
All Residential				\$0.3778	\$0.1757	-53.5%	-46.8%	115.1%
Small Commercial****	<= 20 kW	B-1	GFN, CITS-0	\$0.4417	\$0.1798	-59.3%	-52.2%	145.6%
	21 - 299 kW	B-6	CITS-1	\$0.4380	\$0.1665	-62.0%	-55.0%	163.0%
Medium Commercial****	300 - 499 kW	B-10	CITS-2, CIP-2	\$0.3995	\$0.1563	-60.9%	-55.7%	155.6%
	500 - 999 kW	B-19	CITS-3, CIP-3, CITT-3	\$0.3452	\$0.1464	-57.6%	-51.9%	135.7%
Large Commercial****	=> 1 MW	B-20	CITS-4, CIP-4, CITT-4	\$0.2506	\$0.1305	-47.9%	-47.8%	92.0%
Lighting	Traffic Signals	TC-1	TS	\$0.4360	\$0.1425	-67.3%	-61.5%	206.1%
	Street Lighting	various	SLS,NLGT	\$0.5632	\$0.1599	-71.6%	-67.6%	252.2%
Agriculture	Ag & Pumping	AG	ASN/D,AON/D	\$0.3950	\$0.1558	-60.6%	-53.9%	153.5%
System Average				\$0.3657	\$0.1634	-55.3%	-50.1%	123.8%

Notes:

* Projected 2024 average prices for SMUD with rates effective 1-1-24. PG&E average prices in 2024 reflect rates effective 1-1-24, per Advice Letter 7116-E. The rate difference in year 2023 reflects PG&E average rates as of 9-1-23, per Advice Letter 7009-E dated 8-25-23, and SMUD rates effective 1-1-23.

** CARE vs EAPR includes EAPR & EAPRMED customers.

*** There is no indication from PG&E that their CARE rates include customers who have a medical allowance only.

**** Commercial rates include WAPA credits.

Figure 8 – Summary of SMUD and PG&E Rate Comparison in \$/kWh (May 1, 2024 Rates)

Customer		Rate Categories		Average Annual Rate		Difference	Difference	Difference
				PG&E	SMUD	Below PG&E*	Below PG&E*	Above SMUD
Class	Description	PG&E	SMUD	2024	2024	2024	2023	2024
Residential	Standard	E-1	TOD	\$0.4467	\$0.1898	-57.5%	-53.0%	135.4%
	Low Income	CARE***	EAPR & EAPRMED**	\$0.2831	\$0.1328	-53.1%	-48.6%	113.2%
All Residential				\$0.3778	\$0.1800	-52.4%	-46.8%	109.9%
Small Commercial****	<= 20 kW	B-1	GFN, CITS-0	\$0.4417	\$0.1833	-58.5%	-52.2%	141.0%
	21 - 299 kW	B-6	CITS-1	\$0.4380	\$0.1698	-61.2%	-55.0%	158.0%
Medium Commercial****	300 - 499 kW	B-10	CITS-2, CIP-2	\$0.3995	\$0.1594	-60.1%	-55.7%	150.6%
	500 - 999 kW	B-19	CITS-3, CIP-3, CITT-3	\$0.3452	\$0.1493	-56.7%	-51.9%	131.2%
Large Commercial****	=> 1 MW	B-20	CITS-4, CIP-4, CITT-4	\$0.2506	\$0.1330	-46.9%	-47.8%	88.4%
Lighting	Traffic Signals	TC-1	TS	\$0.4360	\$0.1445	-66.9%	-61.5%	201.8%
	Street Lighting	various	SLS,NLGT	\$0.5632	\$0.1573	-72.1%	-67.6%	258.1%
Agriculture	Ag & Pumping	AG	ASN/D,AON/D	\$0.3950	\$0.1591	-59.7%	-53.9%	148.3%
System Average				\$0.3657	\$0.1670	-54.3%	-50.1%	119.0%

Notes:

* Projected 2024 average prices for SMUD with the rate increases effective 1-1-24 and 5-1-24. PG&E average prices in 2024 reflect rates effective 1-1-24, per Advice Letter 7116-E. The rate difference in year 2023 reflects PG&E average rates as of 9-1-23, per Advice Letter 7009-E dated 8-25-23, and SMUD rates effective 1-1-23.

** CARE vs EAPR includes EAPR & EAPRMED customers.

*** There is no indication from PG&E that their CARE rates include customers who have a medical allowance only.

**** Commercial rates include WAPA credits.

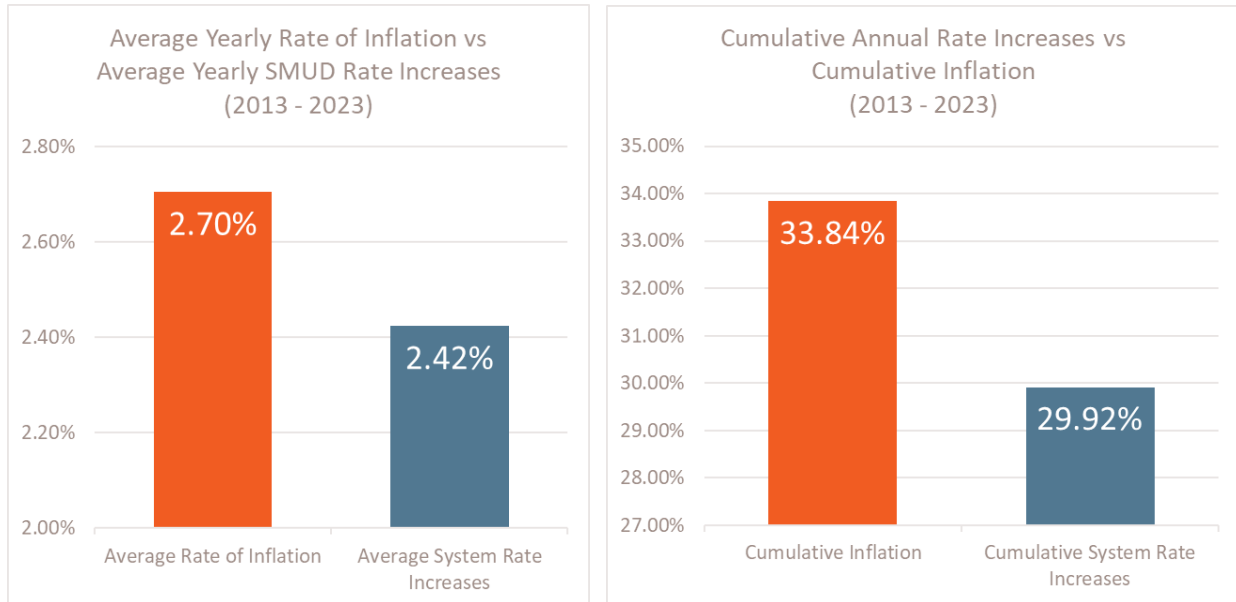
PG&E Residential Time-of-Use Rate

PG&E offers its residential customers a default time-of-use rate (E-TOU-C) that has a peak time-period from 4 to 9 p.m. every day. Customers may choose from a selection of alternative rates, including an optional E-TOU-D (5-8 p.m.) rate which has a shorter 3-hour Peak time-period during weekdays only.

Appendix D: Historical Rate Increases

Figure 9 shows that SMUD's historical rate increases have been below inflation which is based on the Consumer Price Index (CPI) over the past 10 years.

Figure 9 – 2013–2023 Rate Increases vs Inflation*



*Cumulative totals are calculated using compounded inflation and rate increases.

Figure 10 shows SMUD’s rate increases by year since 2000.

Figure 10 – Residential vs. Non-Residential Rate Increase and Energy Surcharge by Year’-

Year	Rate Increase		Energy Surcharge
	Residential	Non-Residential	
2000	0.00%	0.00%	N/A
2001	13.00%	21.00%*	N/A
2002	0.00%	0.00%	-2.60%
2003	0.00%	0.00%	N/A
2004	0.00%	0.00%	-2.70%
2005	6.00%	6.00%	N/A
2006	0.00%	0.00%	N/A
2007	0.00%	0.00%	N/A
2008	7.00%	7.00%	N/A
2009	5.50%	5.50%	N/A
2010	5.50%	5.50%	N/A
2011	2.25%	2.25%	N/A
2012	0.00%	0.00%	N/A
2013	0.00%	0.00%	N/A
2014	2.50%	2.50%	N/A
2015	2.50%	2.50%	N/A
2016	2.50%	2.50%	N/A
2017	2.50%	2.50%	N/A
2018	1.50%	1.00%	N/A
2019	0.00%	1.00%	N/A
1/1/2020	3.75%	3.75%	N/A
10/1/2020	3.00%	3.00%	N/A
1/1/2021	2.50%	2.50%	N/A
10/1/2021	2.00%	2.00%	N/A
3/1/2022	1.50%	1.50%	N/A
1/1/2023	2.00%	2.00%	N/A
1/1/2024	2.75%	2.75%	N/A
5/1/2024	2.75%	2.75%	N/A
1/1/2025	2.75%	2.75%	N/A
5/1/2025	2.75%	2.75%	N/A

RESOLUTION NO. 24-02-07

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board accepts the monitoring report for **Strategic Direction SD-3, Access to Credit Markets**, substantially in the form set forth in **Attachment F** hereto and made a part hereof.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

SACRAMENTO MUNICIPAL UTILITY DISTRICT

OFFICE MEMORANDUM

TO: Board of Directors

DATE: January 24, 2024

FROM: Claire Rogers *CR 1/24/24*

SUBJECT: Audit Report No. 28007741
Board Monitoring Report; SD-03: Access to Credit Markets

Internal Audit Services (IAS) received the SD-3 *Access to Credit Markets* 2023 Annual Board Monitoring Report and performed the following:

- Selected a sample of statements and assertions in the report for review.
- Interviewed report contributors and verified the methodology used to prepare the statements in our sample.
- Validated the reasonableness of the statements in our sample based on the data or other support provided to us.

During the review, nothing came to IAS' attention that would suggest the items sampled within the SD Board Monitoring report did not fairly represent the source data available at the time of the review.

CC:

Paul Lau

Board Monitoring Report 2023

SD-3 Board Strategic Direction on Access to Credit Markets



1. Background

Strategic Direction 3 on Access to Credit Markets states that:

Maintaining access to credit is a core value of SMUD.

Therefore:

- a. For SMUD's annual budgets, the Board establishes a minimum target of cash coverage of all debt service payments (fixed charge ratio) of 1.50 times.
- b. When making resource decisions, SMUD shall weigh the impacts on long-term revenue requirements, debt, financial risk and flexibility.
- c. SMUD's goal is to maintain at least an "A" rating with credit rating agencies.

2. Executive summary

SMUD relies on the use of borrowed funds to pay for a portion of its capital needs on an ongoing basis. The Board adopted SD-3, Access to Credit Markets, to help ensure that SMUD maintains the ability to raise new money at competitive rates in the bond market as needed. Making prudent use of borrowed funds to finance capital improvements can help SMUD to mitigate major rate adjustments in periods of intensive capital expansion, and allows SMUD to allocate the costs of those improvements over their useful lives to the customers who benefit from them. Maintaining access to credit markets supports our objective to be financially flexible to make necessary and timely investment and take advantage of opportunities while remaining competitive.

One of the most important indicators of an organization's ability to access credit markets is the independent assessment made by credit rating agencies. SMUD is rated by the three major rating agencies: Standard & Poor's (S&P), Moody's, and Fitch, which review SMUD's credit on approximately an annual basis. The credit ratings assigned are intended to give investors the rating agency's view of the likelihood that SMUD will repay principal and pay interest on bonds when due. They utilize financial metrics in assessing creditworthiness such as the Fixed Charge Ratio that measures revenue sufficiency to meet obligations, and Days Cash on Hand, a measure of liquidity. They also measure leverage and the capacity to finance future capital projects without placing undue burden on customers, either through borrowing or within our rate structure. SMUD's overall governance and risk

management practices are also important to the agencies, along with the ability and willingness to raise rates when necessary while maintaining competitive low-cost energy for our customers.

As indicated in the attached ratings agency reports, SMUD demonstrates robust metrics, and, thanks to well-managed cash flow, has the flexibility to target a more conservative fixed charge ratio. The most recent SMUD credit reports from both S&P and Fitch also specifically cite the Board's demonstrated willingness to raise rates to support financial performance.

Credit ratings heavily impact an organization's ability to borrow money in the municipal markets, as well as the interest rates they will be required to pay. Higher credit ratings translate into lower borrowing costs. For example, if SMUD's credit ratings were to fall into a lower category, from AA to A, the impact at today's rates would be approximately \$373k/year for every \$100 million borrowed. During a period of financial turmoil, as experienced in early 2020, higher credit ratings allowed SMUD to access credit markets sooner, more easily, and at a lower interest rate than lower rated utilities.

Credit ratings also impact an organization's ability to conduct general business transactions. Trading partners utilize credit ratings as a factor in assessing their willingness to transact with SMUD, and to determine commercial terms. Stronger credit ratings enable SMUD to negotiate better terms and conditions for contracts, including power purchase agreements, and commercial insurance policies. For example, SMUD's healthy credit ratings minimize the amount of collateral posting required under many of its commodity contracts to hedge natural gas and power. Likewise, if SMUD's ratings were to drop from current levels, collateral posting requirements would increase accordingly. In some cases, a reduction in SMUD's credit ratings below a certain threshold gives our counterparty the right to terminate the contract.

In addition to cash on hand, SMUD maintains a liquidity program consisting of a commercial paper program and a line of credit. The commercial paper program enables SMUD the ability to issue up to \$300 million of commercial paper notes to obtain funding quickly, when its necessary to maintain our liquidity levels. Similarly the line of credit allows SMUD access to up to \$100 million on short notice but has the advantage that it isn't dependent on investor demand. The commercial paper program and line of credit are instrumental in providing comprehensive liquidity support for its operations and capital initiatives. The liquidity program helps to maintain our credit ratings and mitigate many enterprise risks that are otherwise difficult or financially prohibitive to mitigate through standard means. The commercial paper program and line of credit are structured with agreements from three separate banks, further reducing concentration risk and enhancing overall execution.

In support of maintaining SMUD's financial strength, credit ratings, and to help mitigate risk SMUD procures insurance. SMUD maintains comprehensive property and casualty insurance programs designed to protect against catastrophic losses that would adversely effect its financial position or operational capabilities. Insurance programs are continuously reviewed and modified when construction, operational exposures, or developments in the insurance industry so warrant. SMUD's strong financial position, long term relationships with a variety of insurers, and its liquidity program minimize SMUD's susceptibility to the volatility of insurance market cycles. SMUD maintains cash on hand and access to credit to meet potential insurance deductibles and self-insured liability claims and has had no claims that have exceeded coverage limits.

SMUD has remained in compliance with SD-3 as evidenced by the following:

- a. Maintained key financial metrics, including a fixed charge ratio above the minimum policy target of 1.50 times.
 1. 1.65 times in 2022
 2. 2.32 times in 2023 (forecasted figure as of December 31, 2023)
 3. 2.08 times in 2024 (projected in 2024 Budget)
- b. In 2023, credit ratings were affirmed at 'AA' by both S&P and Fitch, while Moody's had previously affirmed 'Aa3' with a positive outlook in 2022, equivalent to 'AA-'.
- c. Refunded the 2013 Series A bonds by issuing variable rate bonds, and entering into a standby bond purchase agreement to provide liquidity for the bonds. The variable rate bonds are converted into a fixed interest rate due to an interest rate swap entered into in 2020. This synthetically fixed bond issuance locked in the refunding's interest rates, generating annual cash flow savings of \$3.3 million to 5.3 million through 2041, which is equivalent to \$55.5 million in net present value savings or \$79.9 million cash flow savings.
- d. In conjunction with the issuance of variable bonds, SMUD successfully established a new Standby Bond Purchase Agreement (SBPA) with TD Bank. Leveraging SMUD's robust AA credit rating, we received a range of SBPA offers, culminating in the execution of an agreement with TD Bank featuring highly competitive pricing.
- e. Refunded the 2013 Series B bonds with fixed rate bonds and terminated the associated interest rate swap entered into in 2020. This transaction reduced risk and locked in the savings from the refunding, generating annual cash flow savings of \$1.7 million through 2033, which is equivalent to \$14.3 million in net present value savings, or \$18.1 million cash flow savings.

- f. Successfully mitigated interest rate risk in a volatile market environment by strategically refunding \$200 million worth of Commercial Paper through the issuance of long-term fixed-rate debt. This transaction, which also was SMUD's first ever Climate Bond certified Green Bond issuance, also ensured that the entire \$400 million capacity remains available to meet our future borrowing requirements to support our capital improvement program and Zero Carbon Plan.
- g. Accessed credit markets with multiple issuances and rollovers of commercial paper totaling \$150 million outstanding by the end of 2023. The commercial paper issuances were to support SMUD's liquidity needs and capital improvement program.
- h. Additional supplemental contributions of \$44 million were made to CalPERS. This was part of a 10-year pension funding strategy to eliminate our unfunded pension liability, which is an obligation rating agencies are increasingly focusing on in their reviews. Addressing the unfunded liability sooner will help control rate increases. These costs would continue to grow into the future since paying only the required minimum payments may not fully mitigate the compounding nature of the outstanding liability adequately. SMUD's most current valuations show the Pension funded status at 88% as of June 30, 2022, and the funded status of Other Post Employment Benefits (OPEB) at 92% as of June 30, 2023.
- i. Continued to successfully manage the property and casualty insurance programs amidst a historically challenging market, renewing most programs within expiring terms and conditions. Obtaining wildfire coverage remains a challenge, but even in this tumultuous market SMUD successfully increased the program limit by \$25 million, and reduced the self-insured portion of the first \$100 million layer by \$12.5 million.
- j. Negotiated a \$50 million advance payment on the anticipated claim recovery for the Cosumnes Power Plant (CPP) steam turbine failure insurance claim. SMUD also settled the property damage claim for the CPP steam turbine failure which resulted in SMUD receiving a \$13.6 million payment.

3. Additional supporting information

Details on ratings variables, SMUD specific credit strengths, factors that could lead to an upgrade, and insurance are listed below.

Financial Strengths:

Maintaining SMUD's financial strength is a key component to continually accessing credit markets. Below is a list of SMUD specific financial strengths mentioned in recent rating agency reports:

- a. Strong financial operations management

- b. Strong financial performance with fixed charge ratio averaging over 1.8x during the last 5 years
- c. Robust liquidity
- d. Low operating costs
- e. Competitive rates
- f. Diverse resource portfolio
- g. Favorable debt and liabilities profile
- h. Proactive planning and hedging practices
- i. Timely rate setting record
- j. Strong wildfire mitigation toolkit

Ratings Variables:

The rating agencies evaluate a number of factors in deriving municipal power ratings. These include:

- a. Financial ratios and metrics
- b. Governance Structure and Management
- c. Rate Competitiveness
- d. Cost of production/purchased power (particularly with respect to higher cost renewables)
- e. Risk Management Practices
- f. Service area demographics
- g. Regulatory factors

4. Challenges:

Below are comments from recent rating's agency reports regarding challenges to SMUD's financial strength that could affect SMUD's ability to access credit markets:

- a. Wildfire liability and inverse condemnation exposure
- b. More significant capital spending affecting rate competitiveness and key financial metrics
- c. Substantially weakened competitive position or impaired ability to maintain liquidity and achieve fixed charge ratios commensurate with recent years' levels
- d. Prioritizing environmental goals or rate affordability over preservation of the financial profile

5. Recommendation:

It is recommended that the Board accept the Monitoring Report for SD SD-3 Board Strategic Direction on Access to Credit Market.

RESOLUTION NO. 24-02-08

WHEREAS, SMUD issued a Request for Qualifications (RFQ) to create a Senior Manager Pool and an Alternate Pool of experienced financial institutions to serve as Senior Managing Underwriters for future transactions with SMUD; and

WHEREAS, evaluation criteria consisted of the willingness and ability to underwrite bonds, experience and qualifications of the firm, experience and qualifications of the underwriting team, marketing approach, and technical expertise; and

WHEREAS, members of the Senior Manager Pool may be appointed to serve as senior manager, co-senior manager or co-manager on future SMUD bond issuances; and

WHEREAS, members of the Alternate Pool may be moved up to the Senior Manager Pool, and members of the Senior Manager Pool may be moved down to the Alternate Pool given a change in qualifications, as determined by the Chief Executive Officer and General Manager; **NOW**,

THEREFORE,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. This Board authorizes the Chief Executive Officer and General Manager, or his designee, to select an underwriting team from the Senior Manager Pool listed on Schedule A on a transaction-by-transaction basis until July 31, 2029.

Section 2. This Board authorizes the Chief Executive Officer and General Manager, or his designee, to move underwriters between the Senior

Manager Pool, as set forth in Schedule A, and the Alternate Pool, as set forth in Schedule B.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

Schedule A – Senior Manager Pool

Bank of America
Barclays
Goldman Sachs
JP Morgan
Morgan Stanley
Wells Fargo

Schedule B – Alternate Pool

Royal Bank of Canada
Siebert Williams Shank
TD Securities

RESOLUTION NO. 24-02-09

WHEREAS, the **Advanced Metering Infrastructure (AMI)** platform, originally implemented in 2009 and partially funded by SMUD's SmartSacramento Grid Investment Grant, is comprised of communication infrastructure equipment (smart meters), a communication network, and back-office systems; and

WHEREAS, in 2021 and 2022, as part of SMUD's Next Generation AMI Roadmap, use cases supporting the **2030 Zero Carbon Plan** were analyzed and next generation smart meters were identified as a key enabling technology required to support many of the use cases due to their advanced functionality and additional data granularity; and

WHEREAS, in October 2023, SMUD was awarded a \$50 million grant from the **Department of Energy Grid Deployment Office's (DOE) Grid Resilience and Innovation Partnerships (GRIP)** program, wherein **Itron Networked Solutions, Inc. (Itron)** was a named partner, for new technologies to increase reliability, efficiency, and flexibility of the electric grid; and

WHEREAS, as part of the **GRIP** grant, beginning in September 2024 and continuing through 2025, SMUD will deploy 200,000 **Itron** Riva edge computing sensors with measurement capabilities (smart meters) and eight Distributed Intelligence (DI) applications; and

WHEREAS, by Resolution No. 23-12-05, adopted on December 14, 2023, this Board authorized sole source Contract No. 4600001818 with **Itron** for a one-year term in the amount of \$15 million, plus applicable taxes and fees, for the initial purchase of meters due to global supply chain lead time constraints of 12-plus months; and

WHEREAS, **Itron** is the only metering manufacturer with a commercially available DI-enabled meter and associated DI applications deployed at scale, has the only DI-enabled meter compatible with SMUD's existing **AMI** mesh network and existing back-office system, is a named partner in the **GRIP** grant, and does not have any resellers; and

WHEREAS, the **Itron** Riva edge computing sensors (smart meters) with measurement capabilities are priced very competitively (within 11% on average compared to SMUD's existing legacy smart meters that lack the DI-enabled capabilities) and the cost per meter for the most common form factors is within 9% of their legacy smart meter equivalents; and

WHEREAS, costs for software and professional services are found to be competitive when compared to other software products and associated professional services purchased by SMUD and thus are considered fair and reasonable; and

WHEREAS, it would not be productive or in the best interest of SMUD to advertise for competitive bids for the products and services referred to above because they can only be obtained from **Itron**; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. That the Chief Executive Officer and General Manager, or his designee, is authorized on behalf of SMUD to negotiate and execute a sole source Master Services Agreement with **Itron Networked Solutions, Inc.** to purchase hardware, software, and professional services to enhance the **Advanced Metering Infrastructure (AMI)** platform in an amount not to exceed \$42,500,000.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to make future changes to the terms and conditions of the contract that, in his prudent judgment: (a) further the primary purpose of the contract; (b) are intended to provide a net benefit to SMUD; and (c) do not exceed the authorized contract amount and applicable contingencies.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

RESOLUTION NO. 24-02-10

WHEREAS, by Resolution No. 21-03-06, adopted on March 18, 2021, this Board authorized the Chief Executive Officer and General Manager to award Contract No. 4600001474 to **Hot Line Construction, Inc. (Hot Line Contract)** and Contract No. 4600001475 to **Mountain G Enterprises (Mountain G Contract)** (collectively, the **Contracts**) to provide general line construction services for a period of two years from March 22, 2021, to March 21, 2023, for a total aggregate contract amount not-to-exceed \$20 million; and

WHEREAS, Contract Change No. 1 to the **Hot Line Contract** increased rates by 7.14%, 5.44% of which accounted for labor and 1.7% for increased fuel costs, and extended the expiration date to March 21, 2025; and

WHEREAS, Contract Change No. 1 to the **Mountain G Contract** increased Rate Schedule Part B, Line Items 11 and 12 by approximately 36% and 45%, respectively; and

WHEREAS, Contract Change No. 2 to the **Mountain G Contract** added Supplier Education and Economic Development (SEED) subcontractor WBE Traffic Control Inc. to Exhibit I - Designation of Prime Contractor, Subcontractors and Suppliers to perform traffic control where lane closures and/or night work is required; and

WHEREAS, Contract Change No. 3 to the **Mountain G Contract** increased rates by 5.2% for labor and extended the expiration date to March 21, 2025; and

WHEREAS, by Resolution No. 22-10-11, adopted on October 20, 2022, this Board authorized the Chief Executive Officer and General Manager to increase the aggregate contract not-to-exceed amount for general line constructions services by \$20 million, from \$20 million to \$40 million, for the **Contracts**; and

WHEREAS, Contract Change No. 2 to **Hot Line Contract** increased rates to align with current published rates from **Hot Line Construction, Inc.'s** Agreement with the International Brotherhood of Electrical Workers (IBEW) for years 2023 and 2024; and

WHEREAS, Contract Change No. 4 to the **Mountain G Contract** modified invoicing terms from Net 45 days to Net 30 days and increased rates to align with current published rates from **Mountain G Enterprises's** Agreement with the International Brotherhood of Electrical Workers (IBEW) for years 2023 and 2024; and

WHEREAS, the **Contracts** were increased by the allowable contingency amount of \$4 million; and

WHEREAS, SMUD has been adversely affected by the labor climate induced by Pacific Gas & Electric (PG&E) and its ongoing commitment to reduce wildfire risk across its service area and the resultant loss of contract crews that supported critical Line Assets programs; and

WHEREAS, increasing the total aggregate amount for the **Contracts** will allow SMUD to augment general line construction work while maintaining flexibility to realign its internal workforce to complete workload;

NOW, THEREFORE,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. That this Board hereby authorizes the Chief Executive Officer and General Manager, or his designee, to increase the aggregate contract not-to-exceed amount for general line constructions services by \$12 million, from \$44 million to \$56 million, for Contract No. 4600001474 with **Hot Line Construction, Inc.** and Contract No. 4600001475 with **Mountain G Enterprises** (collectively, the **Contracts**).

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to make future changes to the terms and conditions of the **Contracts** that, in his prudent judgment: (a) further the primary purpose of

the **Contracts**; (b) are intended to provide a net benefit to SMUD; and (c) do not exceed the authorized contract amounts and applicable contingencies.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

RESOLUTION NO. 24-02-11

WHEREAS, by Resolution No. 20-03-05, adopted on March 17, 2020, this Board authorized the Chief Executive Officer and General Manager to award Contract No. 4600001364 to **Wright Tree Service of the West, Inc. (Wright Contract)** and Contract No. 4600001365 to **The Original Mowbray's Tree Service, Inc. (Mowbray Contract)** (collectively, the **Contracts**) to provide vegetation management utility line and subject pole clearance services for a three-year term starting March 23, 2020, with two optional one-year extensions for each contract, for a total not-to-exceed aggregate amount of \$156 million; and

WHEREAS, Contract Change No. 1 to the **Wright Contract** replaced Exhibit D, Performance Bond and Exhibit E, Payment Bond forms with revised annual bond forms; and

WHEREAS, Contract Change No. 1 to the **Mowbray Contract** added wildfire liability to \$15M General Liability Insurance Requirements and reduced Rate Schedule Items 70-79, 87-98, 100-103, and 105-106 by an average of 69% resulting in a total contract savings of 1% for the initial three-year term, and an additional 1% for each of the two option years with no change to the total aggregate contract not-to-exceed amount; and

WHEREAS, Contract Change No. 2 to the **Wright Contract** added Skyline Tree Enterprises, Inc. as a designated subcontractor to assist **Wright Tree Service of the West, Inc. (WTS)** with the performance of utility line clearance services and added Sierra Integrated Services, Inc. as a designated subcontractor to perform pole clearing work via herbicide spraying; and

WHEREAS, Contract Change No. 2 to the **Mowbray Contract** added subcontractor R&B Quality Tree Care, Inc. to Exhibit I, Designation of Prime Contractor, Subcontractors and Suppliers; and

WHEREAS, Contract Change No. 3 to the **Wright Contract** substituted Skyline Tree Enterprise, Inc. for Maximus Tree Works as the designated subcontractor to assist **WTS** with the performance of utility line clearance services; and

WHEREAS, Contract Change No. 3 to the **Mowbray Contract** added subcontractor California Trees, Inc. dba Cal Trees to Exhibit I, Designation of Prime Contractor, Subcontractors and Suppliers; and

WHEREAS, Contract Change No. 4 to the **Wright Contract** added subcontractors P31 Enterprises, Inc., VM Tree Service, and R&B Quality Tree Care, Inc. to Exhibit I, Designation of Prime Contractor, Subcontractors and Suppliers; and

WHEREAS, Contract Change No. 4 to the **Mowbray Contract** revised the address and point of contact for **The Original Mowbray's Tree Service, Inc. (Mowbray's)**; and

WHEREAS, Contract Change No. 5 to the **Wright Contract** included an increase in rates by 2.75% pursuant to labor increases driven by Senate Bill 247 (Dodd) Wildland fire prevention: vegetation management (SB 247) and ratification of the International Brotherhood of Electrical Workers (IBEW) Labor Agreement in July 2022 (IBEW Labor Agreement); and

WHEREAS, Contract Change No. 5 to the **Mowbray Contract** increased rates by 2.8% in Year 3 (retroactively effective to June 1, 2022), 1.8% in option Year 4, and 1.7% in option Year 5 pursuant to labor increases driven by SB 247 and ratification of the IBEW Labor Agreement; and

WHEREAS, Contract Change No. 6 to the **Mowbray Contract** extended the expiration date from March 23, 2023, to March 22, 2025 (exercising Option Years 1 and 2), and reduced rates across the majority of line items by an average of 3.8% in Option Year 1 (effective March 23, 2023) and by an average of 5.4% in Option Year 2 (effective March 23, 2024); and

WHEREAS, Contract Change No. 6 to the **Wright Contract** included an increase in rates, consistent with Contract Change No. 5, on overtime equipment/operator line items; and

WHEREAS, Contract Change No. 7 to the **Mowbray Contract** removed Performance and Payment Bond Requirements; and

WHEREAS, Contract Change No. 7 to the **Wright Contract** extended the expiration date from March 23, 2023, to March 22, 2024 (exercising

Option Year 1 only), and reduced rates to select line items by an average of 2.9% effective June 1, 2023; and

WHEREAS, Contract Change No. 8 to the **Wright Contract** amended the Rate Schedule to include Line Items 112-117 for a 100' Aerial Lift with Operator, Skid Steer with Operator, and Backyard Lift with Operator at straight time and overtime rates; and

WHEREAS, Contract Change No. 9 to the **Wright Contract** removed Performance and Payment Bond Requirements; and

WHEREAS, Contract Change No. 10 to the **Wright Contract** extended the expiration date from March 23, 2024, to March 22, 2025 (exercising Option Year 2); and

WHEREAS, the **Contracts** were increased by the allowable contingency amount of \$15.6 million to an aggregate not-to-exceed amount of \$171.6 million; and

WHEREAS, additional funds are needed in light of unplanned work resulting from the 2023-2024 January storm series and increasing the total aggregate amount for the **Contracts** will support SMUD's routine maintenance Vegetation Management Program to ensure safety and reliability; **NOW, THEREFORE,**

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. That this Board hereby authorizes the Chief Executive Officer and General Manager, or his designee, to increase the aggregate contract not-to-exceed amount for vegetation management utility line and subject pole clearance services by \$10 million, from \$171.6 million to \$181.6 million, for Contract No. 4600001364 with **Wright Tree Service of the West, Inc.** and Contract No. 4600001365 with **The Original Mowbray's Tree Service, Inc.** (collectively, the **Contracts**).

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to make future changes to the terms and conditions of the **Contracts** that, in his prudent judgment: (a) further the primary purpose of

the **Contracts**; (b) are intended to provide a net benefit to SMUD; and (c) do not exceed the authorized contract amounts and applicable contingencies.

Approved: February 15, 2024

INTRODUCED: DIRECTOR SANBORN				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUI-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

President Herber then turned to Discussion Calendar Item 15, to authorize the Chief Executive Officer and General Manager to negotiate and execute a three-year contract renewal and expansion to \$250 million with Bank of America, N.A. (BANA) for a Letter of Credit (BANA LOC) that supports the outstanding Commercial Paper Series M, with terms substantially similar to the attached term sheet.

Russell Mills, Director, Treasury Operations & Commodity Risk Management, and Treasurer gave a presentation on Item 15. A copy of the slides used in his presentation is attached to these minutes.

No public comment was forthcoming on Discussion Calendar Item 15.

After some discussion, Vice President Fishman moved for approval of Discussion Calendar Item 15, Director Rose seconded, and Resolution No. 24-02-12 was approved by a vote of 6-0, with Director Bui-Thompson absent.

RESOLUTION NO. 24-02-12

**SECOND SUPPLEMENTAL RESOLUTION
(SUPPLEMENTAL TO RESOLUTION NO. 19-02-02,
ADOPTED FEBRUARY 21, 2019, AS SUPPLEMENTED AND AMENDED BY
RESOLUTION NO. 22-02-06, ADOPTED FEBRUARY 17, 2022)
AUTHORIZING THE INCREASE OF THE AGGREGATE PRINCIPAL
AMOUNT OF COMMERCIAL PAPER NOTES, SERIES M THAT MAY BE
OUTSTANDING FROM TIME TO TIME**

WHEREAS, the Board of Directors of SMUD adopted Resolution No. 19-02-02 (the “Original Resolution”) authorizing the issuance of SMUD’s Commercial Paper Notes, Series M in two subseries (collectively, the “Notes”) in an amount not to exceed \$111,250,000 outstanding at any one time under (a) Articles 6a and 6b of Chapter 6 of the Municipal Utility District Act (California Public Utilities Code Section 12850 et seq.), (b) Chapter 7.5 of the Municipal Utility District Act (California Public Utilities Code Section 13371 et seq.) and (c) Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (California Government Code Section 53580 et seq.);

WHEREAS, the Board of Directors of SMUD adopted Resolution No. 22-02-06 (the “First Supplemental Resolution” and, together with the Original Resolution, the “Amended Resolution”) authorizing the increase of the aggregate principal amount of the Notes that may be outstanding at any one time under the Original Resolution to \$150,000,000;

WHEREAS, SMUD has determined that it is in its best interests to authorize the increase of the aggregate principal amount of the Notes that may be outstanding at any one time under the Original Resolution to \$250,000,000;

WHEREAS, subject to the terms of the Reimbursement Agreement (as defined in the Original Resolution), Section 7.01 of the Original Resolution permits the modification or amendment of the Original Resolution to increase the principal amount of Notes that may be issued thereunder without notice to or the consent of any Noteholder (as defined in the Original Resolution);

WHEREAS, SMUD has determined to modify and amend the Amended Resolution as set forth in this Second Supplemental Resolution to provide for the increase in the principal amount of the Notes that may be issued under the Amended Resolution;

WHEREAS, the amendments set forth in this Second Supplemental Resolution will not go into effect until any conditions precedent to the effectiveness of such amendments set forth in the Reimbursement Agreement have been satisfied;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Sacramento Municipal Utility District, as follows:

ARTICLE I

DEFINITIONS

Section 1.01. Definitions. Unless the context otherwise requires, all capitalized terms used in this Second Supplemental Resolution and not otherwise defined shall have the meanings given thereto in the Original Resolution.

ARTICLE II

AMENDMENTS TO ORIGINAL RESOLUTION

Section 2.01. Authorization. The increase of the aggregate principal amount of the Notes that may be outstanding under the Amended Resolution to \$250,000,000 is hereby authorized. Section 2.01 of the Original Resolution, as previously amended by the First Supplemental Resolution, is hereby further amended to read in full as follows:

“Section 2.01. Authorization. The Notes (consisting, collectively, of the Subseries M-1 Notes and the Subseries M-2 Notes) may be issued in an unlimited aggregate principal amount so long as the aggregate principal amount of the Notes outstanding at any one time plus the interest on such outstanding Notes payable at the maturity thereof does not exceed the Stated Amount (as defined in the Letter of Credit), as reduced and reinstated from time to time as provided in the Letter of Credit, and the outstanding aggregate principal amount of the Notes does not exceed \$250,000,000. Subject to the immediately preceding sentence and the other conditions set forth in this Resolution, the Notes may be issued as either Subseries M-1 Notes or Subseries M-2 Notes as determined by the Authorized Officer authorizing the issuance of Notes pursuant to Section 2.02 hereof.”

ARTICLE III

MISCELLANEOUS

Section 3.01. Additional Actions. The Chief Executive Officer and General Manager, any Member of the Executive Committee, the Treasurer, the Secretary or the Chief Financial Officer and the other officers of SMUD are hereby authorized and directed, jointly and severally, to do any and all things and to execute and deliver any and all documents (including but not limited to reimbursement agreements, fee letters, depository agreements, tax certificates, dealer agreements, commercial paper memoranda and/or amendments to any of the foregoing) which they may deem necessary or advisable in order to effectuate the purposes of this Second Supplemental Resolution.

Section 3.02. Effect of Second Supplemental Resolution. The amendments to the Amended Resolution set forth in this Second Supplemental Resolution will not go into effect until any conditions precedent to the effectiveness of such amendments set forth in the Reimbursement Agreement have been satisfied. The Amended Resolution is hereby ratified and confirmed and shall continue in full force and effect in accordance with the terms and provisions thereof, as modified and amended by this Second Supplemental Resolution.

Approved: February 15, 2024

INTRODUCED: DIRECTOR FISHMAN				
SECONDED: DIRECTOR ROSE				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
HERBER	X			
ROSE	X			
BUL-THOMPSON				X
FISHMAN	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

SECOND AMENDMENT TO REIMBURSEMENT AGREEMENT

This Second Amendment to Reimbursement Agreement (this “*Amendment*”) dated February [], 2024 (the “*Amendment Date*”), is between SACRAMENTO MUNICIPAL UTILITY DISTRICT, a municipal utility district of the State of California (together with its successors and assigns, “*SMUD*”) and BANK OF AMERICA, N.A., a national banking association (together with its successors and assigns, the “*Bank*”). All capitalized terms used herein and not defined herein shall have the meanings set forth in the hereinafter defined Agreement.

WITNESSETH

WHEREAS, SMUD and the Bank have previously entered into that certain Reimbursement Agreement dated as of February 1, 2019 (as amended, restated, supplemented or otherwise modified from time to time, the “*Agreement*”), relating to Irrevocable Transferable Letter of Credit No. 68145016, supporting SMUD’s Commercial Paper Notes, Series M;

WHEREAS, pursuant to Section 7.1 of the Agreement, the Agreement may be amended by a written amendment thereto, executed by SMUD and the Bank; and

WHEREAS, SMUD has requested that certain amendments be made to the Agreement, and the Bank has agreed to make such amendments to the Agreement as described herein subject to the terms and conditions set forth herein.

NOW THEREFORE, in consideration of the premises, the parties hereto hereby agree as follows:

SECTION 1. AMENDMENTS.

Upon the satisfaction of the conditions precedent set forth in Section 3 hereof, the Agreement is hereby amended as follows:

1.01. The first recital in the introductory paragraphs of the Agreement is hereby amended in its entirety and as so amended shall be restated to read as follows:

WHEREAS, pursuant to the authority granted by the laws of the State of California, particularly Articles 6a and 6b of Chapter 6 of the Municipal Utility Act (California Public Utilities Code Section 12850 et seq.), Chapter 7.5 of the Municipal Utility District Act (California Public Utilities Code Section 13371 et seq.) and Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (California Government Code Section 53.80 et seq.), Resolution No. 19-02-02 adopted by the Board of Directors of SMUD, on February 21, 2019 (the “*2019 Note Resolution*”), Resolution No. 22-02-06 adopted by the Board of Directors of SMUD, on February 17, 2022 (the “*2022 Note Resolution*”), and Resolution No. 24-02-[] adopted by the Board of Directors of SMUD, on February 15, 2024 (the “*2024 Note Resolution*”, and together with the 2019 Note Resolution and the 2022 Note Resolution, collectively, the “*Note Resolution*”)

SMUD has established a commercial paper program providing for the issuance of up to \$250,000,000 in aggregate principal amount of its Commercial Paper Notes, Series M (the “Notes”); and

1.02. The following defined terms in Section 1.1 of the Agreement are hereby deleted from the agreement in their entirety: “LIBOR Rate”, “London Banking Day”.

1.03. The following defined term is hereby added to Section 1.1 of the Agreement in appropriate alphabetical order as follows:

“*Second Amendment Effective Date*” means February [], 2024.

1.04. The following defined terms in Section 1.1 of the Agreement are hereby amended in their entirety and as so amended shall be restated to read as follows:

“*Base Rate*” means, for any day, a fluctuating rate of interest per annum equal to the greatest of (i) the Prime Rate in effect at such time plus one percent (1.00%), (ii) the Federal Funds Rate in effect at such time plus two percent (2.00%), and (iii) seven percent (7.00%).

“*Depository*” means U.S. Bank Trust Company, National Association, as successor in interest to U.S. Bank National Association, and its permitted successors and assigns.

“*Fee Letter*” means that certain Second Amended and Restated Fee Letter, dated the Second Amendment Effective Date, between SMUD and the Bank, as the same may be amended, amended and restated, modified or supplemented from time to time by written instrument executed by the Bank and SMUD, the terms of which are incorporated herein by reference.

1.05. Section 2.1 of the Agreement is hereby amended in its entirety and as so amended shall be restated to read as follows:

Section 2.1. Issuance of Letter of Credit. Upon the terms, subject to the conditions and relying upon the representations and warranties set forth in this Agreement or incorporated herein by reference, the Bank agrees to issue the Letter of Credit substantially in the form of Appendix I hereto. The Letter of Credit shall be in the original stated amount of \$256,164,384 (calculated as the sum of the maximum principal amount of the Notes supported by the Letter of Credit (*i.e.*, \$250,000,000) plus interest thereon at a maximum rate of ten percent (10%) per annum for a period of ninety (90) days calculated on the basis of a year of 365 days and the actual number of days elapsed) (the “*Original Stated Amount*”).

1.06. Section 2.6 of the Agreement is hereby amended in its entirety and as so amended shall be restated to read as follows:

Section 2.6. The Revolving Note. All Obligations shall be made against and evidenced by SMUD's promissory note payable to the order of the Bank in the principal amount equal to the Original Stated Amount, such note to be executed and delivered to the Bank on the Second Amendment Effective Date in the form of Exhibit A attached hereto with appropriate insertions (as amended, restated, supplemented or otherwise modified, the "*Revolving Note*"). All Obligations and all payments and prepayments on account of the principal of and interest on each Obligation shall be recorded by the Bank on its books and records, which books and records shall, absent manifest error, be conclusive as to amounts payable by SMUD hereunder and under the Revolving Note. The Bank may, but shall not be required to, complete the schedule attached to the Revolving Note to reflect the making and status of Drawings and Advances, *provided* that the failure to make or any error in making any such endorsement on such schedule shall not limit, extinguish or in any way modify the obligation of SMUD to repay the Drawings, Unpaid Drawings or Advances. SMUD shall pay principal and interest on the Revolving Note on the dates and at the rates provided for in Sections 2.3 and 2.4 hereof with respect to Unpaid Drawings and Advances.

1.07. All references to \$150,000,000 contained in the Agreement shall be amended and restated to reference \$250,000,000.

1.08. All references to U.S. Bank National Association in its capacity as Depository contained in the Agreement shall be amended and restated to reference U.S. Bank Trust Company, National Association.

1.09. Exhibit A to the Agreement is hereby amended and as so amended shall be restated to read as set forth on Exhibit A attached hereto.

SECTION 2. REQUEST FOR EXTENSION OF STATED TERMINATION DATE.

SMUD hereby requests that the Bank extend the Stated Expiration Date to [____], 202[]¹, and the Bank agrees to such request and will deliver to the Depository a Notice of Extension substantially in the form attached hereto as Exhibit B to effectuate such extension.

¹ [NTD – 3 years from closing.]

SECTION 3. CONDITIONS PRECEDENT.

This Amendment shall be effective as of the Amendment Date subject to the satisfaction of or waiver by the Bank of all of the following conditions precedent, each in form and substance satisfactory to the Bank and its counsel:

3.01 Delivery by SMUD to the Bank of (i) an executed counterpart of this Amendment, (ii) an executed original of the Second Amended and Restated Revolving Note dated February [], 2024, by SMUD in favor of the Bank (the “*Revolving Note*”), (iii) an executed counterpart of the Second Amended and Restated Fee Letter dated February [], 2024, between SMUD and the Bank (the “*Fee Letter*”), and (iv) the Second Amendment to Irrevocable Letter of Credit No. 68145016 dated February [], 2024, executed by the Bank and U.S. Bank Trust Company, National Association.

3.02. Receipt by the Bank of a customary certificate executed by appropriate officers of SMUD including (i) the incumbency and signature of the officer of SMUD executing this Amendment and the other Program Documents to be executed and delivered by SMUD on the Amendment Date, and (ii) a certified copy of the authorizing resolution approving the execution and delivery of this Amendment, the Revolving Note, and the Fee Letter by SMUD, and SMUD’s performance of its obligations hereunder and thereunder and under the Agreement, as amended hereby.

3.03. Receipt by the Bank of an opinion addressed to the Bank and dated the Amendment Date of the general counsel for SMUD, in form and substance satisfactory to the Bank, and addressing (i) SMUD’s existence, (ii) SMUD’s power and authority to enter into this Amendment, the Revolving Note, and the Fee Letter and to perform its obligations hereunder and thereunder and under the Agreement, as amended hereby, (iii) SMUD’s execution and delivery of this Amendment, the Revolving Note, and the Fee Letter, (iv) the enforceability of SMUD’s obligations under this Amendment, the Revolving Note, the Fee Letter, and the Agreement, as amended hereby, (v) that SMUD has obtained all consents necessary to execute, deliver and perform this Amendment, the Revolving Note, and the Fee Letter, (vi) the execution and delivery of this Amendment, the Revolving Note, and the Fee Letter by SMUD, and SMUD’s performance of its obligations hereunder and thereunder and under the Agreement, as amended hereby, will not violate any law, order or agreement to which SMUD is subject or to which SMUD is a party, and (vii) there is no litigation pending or threatened against SMUD that would prevent SMUD from executing and delivering this Amendment, the Revolving Note, and the Fee Letter or performing its obligations hereunder or thereunder or under the Agreement, as amended hereby.

3.04 Receipt by the Bank of an opinion of note counsel or a reliance letter thereon.

3.05 Payment to the Bank on the Amendment Date of all fees, costs, and expenses payable on the Amendment Date, including the reasonable legal fees and expenses of counsel to the Bank.

3.06 The Bank shall have received such other documents, certificates, and opinions as the Bank or Bank's counsel shall have reasonably requested, and all other legal matters pertaining to the execution and delivery of this Amendment shall be satisfactory to the Bank and its counsel.

SECTION 4. REPRESENTATIONS AND WARRANTIES OF SMUD.

4.01. SMUD hereby represents and warrants that the following statements shall be true and correct as of the date hereof:

(a) the representations and warranties of SMUD contained in Article Four of the Agreement and in each of the Program Documents are true and correct on and as of the date hereof as though made on and as of such date (except to the extent the same expressly relate to an earlier date and except that the representations contained in Section 4.1(e) of the Agreement shall be deemed to refer to the most recent financial statements of SMUD delivered to the Bank pursuant to Section 5.1(a) of the Agreement); and

(b) no Default or Event of Default has occurred and is continuing or would result from the execution of this Amendment.

4.02. In addition to the representations given in Article Four of the Agreement, SMUD hereby represents and warrants as follows:

(a) The execution, delivery and performance by SMUD of this Amendment, the Revolving Note, the Fee Letter, and the Agreement, as amended hereby, are within its powers, have been duly authorized by all necessary action and do not contravene any law, rule or regulation, any judgment, order or decree or any contractual restriction binding on or affecting SMUD.

(b) No authorization, approval or other action by, and no notice to or filing with, any governmental authority or regulatory body is required for the due execution, delivery and performance by SMUD of this Amendment, the Revolving Note, the Fee Letter, the Agreement, as amended hereby.

(c) This Amendment, the Revolving Note, the Fee Letter, and the Agreement, as amended hereby, constitute legal, valid and binding obligations of SMUD enforceable against SMUD in accordance with their respective terms, except that (i) the enforcement thereof may be limited by bankruptcy, reorganization, insolvency, liquidation, moratorium and other laws relating to or affecting the enforcement of creditors' rights and remedies generally, the exercise of judicial discretion in appropriate cases and by the limitations on legal remedies against SMUD, and (ii) no representation or warranty is expressed as to the availability of equitable remedies.

SECTION 5. MISCELLANEOUS.

5.01. Except as specifically amended herein, the Agreement shall continue in full force and effect in accordance with its terms. Reference to this Amendment need not be made in any

note, document, agreement, letter, certificate, the Agreement or any communication issued or made subsequent to or with respect to the Agreement, it being hereby agreed that any reference to the Agreement shall be sufficient to refer to, and shall mean and be a reference to, the Agreement, as hereby amended. In case any one or more of the provisions contained herein should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired hereby. PURSUANT TO SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW (OR ANY SUCCESSOR STATUTE THERETO), THIS AMENDMENT SHALL BE DEEMED TO BE A CONTRACT UNDER, AND SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK AND APPLICABLE FEDERAL LAW; *PROVIDED, HOWEVER*, THAT THE CAPACITY, POWER AND AUTHORITY OF SMUD TO ENTER INTO THIS AMENDMENT AND THE OBLIGATIONS OF SMUD HEREUNDER SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA AND APPLICABLE FEDERAL LAW WITHOUT REGARD TO CHOICE OF LAW RULES.

5.02. This Amendment may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument. This Amendment may be delivered by the exchange of signed signature pages by facsimile transmission or by e-mail with a pdf copy or other replicating image attached, and any printed or copied version of any signature page so delivered shall have the same force and effect as an originally signed version of such signature page.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed and delivered as of the Amendment Date.

BANK OF AMERICA, N.A.

By: _____

Name: Brent Riley

Title: Senior Vice President

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____

Name: Russell Mills

Title: Treasurer

EXHIBIT A

EXHIBIT A

SECOND AMENDED AND RESTATED REVOLVING NOTE

**SACRAMENTO MUNICIPAL UTILITY DISTRICT
COMMERCIAL PAPER NOTES
SERIES M**

February [], 2024

\$256,164,384

The Sacramento Municipal Utility District (“*SMUD*”), for value received, hereby promises to pay to the order of Bank of America, N.A. (the “*Bank*”), pursuant to that certain Reimbursement Agreement dated as of February 1, 2019 (as amended, restated, or otherwise modified from time to time, the “*Reimbursement Agreement*”), between SMUD and the Bank and that certain Second Amended and Restated Fee Letter dated February [], 2024 (as amended, restated, or otherwise modified from time to time, the “*Fee Letter*”), between SMUD and the Bank, at the office of the Bank at 211 N. Robinson Ave., OK1-100-02-30, Oklahoma City, Oklahoma 73102, the aggregate unpaid principal amount of all Obligations (as defined in the Reimbursement Agreement) pursuant to the Reimbursement Agreement and the Fee Letter on the dates and in the amounts provided for in the Reimbursement Agreement and the Fee Letter.

SMUD promises to pay interest on the unpaid principal amount of all Drawings, Unpaid Drawings and Advances and all other Obligations owed to the Bank under the Reimbursement Agreement and the Fee Letter on the dates and at the rate or rates provided for in the Reimbursement Agreement and the Fee Letter. All payments of principal and interest shall be made in any coin or currency of the United States of America which at the time of payment is legal tender for public and private debts in immediately available funds. All capitalized terms used herein and not otherwise defined herein shall have the meanings specified in the Reimbursement Agreement.

This Second Amended and Restated Revolving Note (this “Revolving Note”) is the Revolving Note referred to in the Reimbursement Agreement and is entitled to the benefits thereof and of the Program Documents referred to therein. As provided in the Reimbursement Agreement, this Revolving Note is subject to prepayment, in whole or in part, in accordance with the terms of the Reimbursement Agreement.

The Bank agrees, by acceptance of this Revolving Note, that it will make a notation on the schedule attached hereto of all Drawings, Unpaid Drawing and Advances evidenced hereby and all principal payments and prepayments made hereunder and of the date to which interest hereon has been paid, all as provided in the Reimbursement Agreement; *provided, however*, that the failure to make any such notation shall not limit or otherwise affect the obligation of SMUD hereunder with respect to payments of principal of and interest on this Revolving Note.

This Revolving Note is authorized by SMUD to be issued to provide funds to pay the principal amount of Notes theretofore issued to for the purposes set forth in the Note Resolution and for other authorized purposes. This Revolving Note is issued under and pursuant to and in full compliance with the Reimbursement Agreement providing for the issuance and sale and fixing the form and details of this Revolving Note.

This Revolving Note is an obligation of SMUD secured by a lien on the Available Revenues as more fully described in Section 2.17 of the Reimbursement Agreement.

It is hereby certified that all conditions, acts and things essential to the validity of this Revolving Note exist, have happened and have been done and that every requirement of law affecting the issuance hereof has been duly complied with.

This Second Amended and Restated Revolving Note amends and restates in its entirety that certain Amended and Restated Revolving Note dated February 23, 2022 (the "*Existing Note*"). This Second Amended and Restated Revolving Note shall become effective and supersede all provisions of the Existing Note upon the issuance of this Second Amended and Restated Revolving Note by SMUD and the fulfillment of all conditions precedent hereof but is not intended to be or operate as a novation or an accord and satisfaction of the Existing Note or the indebtedness, obligations and liabilities of SMUD evidenced or provided for thereunder.

[Remainder of Page Intentionally Blank]

IN WITNESS WHEREOF, SMUD has caused this Second Amended and Restated Revolving Note to be executed by an authorized officer of SMUD and this Second Amended and Restated Revolving Note to be dated as of date set forth above.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Name: Russell Mills
Title: Treasurer

**SCHEDULE FOR SECOND AMENDED AND RESTATED REVOLVING NOTE
DATED FEBRUARY [__], 2024
BY SACRAMENTO MUNICIPAL UTILITY DISTRICT
PAYABLE TO BANK OF AMERICA, N.A.**

DATE	AMOUNT OF DRAWING OR ADVANCE MADE	AMOUNT OF PRINCIPAL PAID	DATE TO WHICH INTEREST PAID	DUE DATE	NOTATION MADE BY

EXHIBIT B

NOTICE OF EXTENSION

**ANNEX E
TO
IRREVOCABLE TRANSFERABLE LETTER OF CREDIT
NO. 68145016**

February [], 2024

U.S. Bank Trust Company, National Association, as Depositary
100 Wall Street, Suite 600
New York, New York 10005
Attention: Corporate Trust Department

Re: Notice of Extension

Ladies and Gentlemen:

Reference is hereby made to that certain Irrevocable Transferable Letter of Credit No. 68145016 dated February 28, 2019 (as amended through the date hereof, the "*Letter of Credit*"), established by us in your favor as Depositary. We hereby notify you that the Letter of Credit Expiration Date of the Letter of Credit has been extended to [], 202[]².

You are hereby authorized to attach this Notice of Extension to the Letter of Credit and to treat this Notice of Extension as extending the Letter of Credit Expiration Date of the Letter of Credit.

Very truly yours,

BANK OF AMERICA, N.A.

By: _____
Name: Brent Riley
Title: Senior Vice President

² [NTD – 3 years from closing.]

**SECOND AMENDED AND RESTATED FEE LETTER
DATED FEBRUARY [], 2024**

Reference is hereby made to (i) that certain Reimbursement Agreement dated as of February 1, 2019 (as amended, restated, supplemented or otherwise modified from time to time in accordance with the terms thereof, the “*Agreement*”), between the SACRAMENTO MUNICIPAL UTILITY DISTRICT, a municipal utility district of the State of California (“*SMUD*”), and BANK OF AMERICA, N.A. (the “*Bank*”), relating to the Sacramento Municipal Utility District Commercial Paper Notes, Series M (the “*Notes*”), (ii) that certain Irrevocable Letter of Credit dated February 28, 2019, issued by the Bank pursuant to the Agreement, supporting the Notes (as amended, restated, supplemented or otherwise modified from time to time in accordance with the terms thereof, the “*Letter of Credit*”), and (iii) that certain Amended and Restated Fee Letter dated February 23, 2022 (the “*Existing Fee Letter*”) between SMUD and the Bank. Capitalized terms not otherwise defined herein shall have the meanings set forth in the Agreement or the Letter of Credit, as applicable.

SMUD has requested that the Bank make certain modifications to the Existing Fee Letter and, for the sake of clarity and convenience, the Bank and SMUD wish to amend and restate the Existing Fee Letter in its entirety. This Second Amended and Restated Fee Letter dated the date first written above (this “*Fee Letter*”) amends and restates the Existing Fee Letter in its entirety. SMUD acknowledges and agrees that all fees previously paid to the Bank under the Existing Fee Letter were fully earned and non-refundable. The purpose of this Fee Letter is to confirm the agreement between the Bank and SMUD with respect to, among other things, the Letter of Credit Fees (as defined below) and certain other fees payable to the Bank. This Fee Letter is the “*Fee Letter*” referenced in the Agreement and the terms hereof are incorporated by reference into the Agreement. This Fee Letter and the Agreement are to be construed as one agreement between SMUD and the Bank, and all obligations hereunder are to be construed as obligations thereunder. All references to amounts due and payable under the Agreement will be deemed to include amounts, fees, and expenses payable under this Fee Letter. All amounts, fees, and expenses due and payable prior to February []¹, 2024, shall be paid pursuant to the terms of the Existing Fee Letter; *meaning*, for purposes of clarity that the Letter of Credit Fees for the period from and including January 2, 2024, to but excluding February [], 2024, shall be determined under the Existing Fee Letter and payable on April 1, 2024.

ARTICLE I. FEES AND OTHER AGREEMENTS.

Section 1.1. Letter of Credit Fees. SMUD hereby agrees to pay to the Bank on April 1, 2024, for the period commencing on February [], 2024 to and including March 31, 2024, and quarterly in arrears on the first Business Day of each July, October, January and April (each, a “*Quarterly Payment Date*”) occurring prior to the Termination Date, and on the Termination Date, non-refundable facility fees (the “*Letter of Credit Fees*”) for each day in the related fee period in the amounts determined as set forth below.

¹ [NTD: February [], 2024 references throughout will be updated to use closing date when determined.]

(i) *Defined Terms.* As used in this Section 1.1:

(A) “*Letter of Credit Fee Rate*” shall mean the rate per annum corresponding to the Rating (as defined below), as specified in the applicable Level in the below applicable pricing matrix for each day in the related fee period.

(B) “*Stated Amount*” shall mean the Original Stated Amount (i) less the amount of all prior reductions pursuant to drawings with respect to the payment at maturity of the principal of and interest at maturity of the Notes, (ii) less the amount of any reduction thereof pursuant to a reduction certificate in the form of Annex B to the Letter of Credit, (iii) plus the amount of all reinstatements as provided in the Letter of Credit.

(ii) For the period commencing on February [], 2024 to but excluding April 1, 2025, the Letter of Credit Fees shall be an amount equal to the product of (i) the Letter of Credit Fee Rate determined in accordance with the pricing matrix set forth below, times (ii) the Stated Amount (without regard to any reduction of the Stated Amount subject to reinstatement) for each day in the related fee period.

LEVEL	MOODY’S RATING	S&P RATING	FITCH RATING	LETTER OF CREDIT FEE RATE
Level 1	Aa3 or above	AA- or above	AA- or above	0.29%
Level 2	A1	A+	A+	0.39%
Level 3	A2	A	A	0.49%
Level 4	A3	A-	A-	0.59%
Level 5	Baa1	BBB+	BBB+	0.69%
Level 6	Baa2	BBB	BBB	0.79%
Level 7	Baa3	BBB-	BBB-	0.89%

(iii) For the period commencing on April 1, 2025 and at all times thereafter, the Letter of Credit Fees shall be an amount equal to the product of (i) the Letter of Credit Fee Rate determined in accordance with the pricing matrix set forth below, times (ii) the Stated Amount (without regard to any reduction of the Stated Amount subject to reinstatement) for each day in the related fee period.

LEVEL	MOODY’S RATING	S&P RATING	FITCH RATING	LETTER OF CREDIT FEE RATE
Level 1	Aa3 or above	AA- or above	AA- or above	0.32%
Level 2	A1	A+	A+	0.42%

LEVEL	MOODY'S RATING	S&P RATING	FITCH RATING	LETTER OF CREDIT FEE RATE
Level 3	A2	A	A	0.52%
Level 4	A3	A-	A-	0.62%
Level 5	Baa1	BBB+	BBB+	0.72%
Level 6	Baa2	BBB	BBB	0.82%
Level 7	Baa3	BBB-	BBB-	0.92%

The following paragraphs shall apply to all pricing matrices set forth above. The term “Rating” as used herein shall mean the long-term unenhanced debt rating assigned by Moody’s, Fitch and S&P to any Debt of SMUD secured by or payable from Net Revenues on a parity with Bonds and Parity Bonds. In the event of a split rating (*i.e.*, the Rating of one of the Rating Agencies’ is different than the Rating of any of the other Rating Agencies), the Letter of Credit Fee Rate shall be based upon the Level in which the lowest of the two highest Ratings appears (for the avoidance of doubt, Level 7 is the Level with the lowest Ratings and Level 1 is the Level with the highest Ratings for purposes of the above pricing grids). In the event that less than three Rating Agencies then assign a long-term unenhanced debt rating to Bonds and Parity Bonds, the Letter of Credit Fee Rate shall be based upon the Level in which the lower Rating appears. Any change in the Letter of Credit Fee Rate resulting from a change in a Rating shall be and become effective as of and on the date of the announcement of the change in such Rating. References to ratings levels above are references to rating categories as presently determined by the Rating Agencies and in the event of adoption of any new or changed rating system, including, without limitation, any recalibration or realignment of Rating in connection with the adoption of a “global” rating scale, the rating from the Rating Agency in question referred to above shall be deemed to refer to the rating category under the new rating system that most closely approximates the applicable rating category as currently in effect. In the event that a Rating is suspended or withdrawn (for the avoidance of doubt, a decision by SMUD to cause a Rating Agency to no longer maintain its Rating, for non-credit related reasons and not for the purpose of avoiding the occurrence of an event of default, shall not constitute a suspension or withdrawal of such Rating) from any Rating Agency or upon the occurrence of and during the continuance of an Event of Default, the Letter of Credit Fee Rate shall increase to the sum of the Letter of Credit Fee Rate specified above for Level 7 in the applicable pricing matrix above *plus* 1.50% per annum. The Letter of Credit Fees shall be payable as set forth above, together with interest on the Letter of Credit Fees from the date payment is due until payment in full at the Default Rate.

For the avoidance of doubt, at all times prior to February [], 2024, the Letter of Credit Fees shall be payable and determined in accordance with the Existing Fee Letter.

Section 1.2. Annual Draw Fee. SMUD hereby agrees to pay to the Bank a non-refundable draw fee of \$2,000, which shall be paid annually in advance within thirty (30) days of receipt of an invoice from the Bank.

Section 1.3. Amendment Fee. SMUD hereby agrees to pay to the Bank on the date of any amendment, modification or supplement to the Agreement, the Letter of Credit or this Fee Letter or in connection with any amendment to any Program Document which requires a waiver from, or the consent of, the Bank, a non-refundable amendment fee in an amount equal to \$2,500, plus the reasonable fees of any legal counsel retained by the Bank in connection therewith.

Section 1.4. Transfer Fee. SMUD hereby agrees to pay to the Bank on the date of each transfer of the Letter of Credit to a successor Depository, a non-refundable transfer fee in an amount equal to \$2,500, plus the reasonable fees and expenses of any legal counsel retained by the Bank in connection therewith.

Section 1.5. Termination Fee; Reduction Fee. (a) SMUD hereby agrees to pay to the Bank a termination fee in connection with any termination or replacement of the Letter of Credit by SMUD prior to February 21, 2025, in an amount equal to the difference between (A) the product of (i) the Letter of Credit Fee Rate in effect on the date of such termination or replacement under the applicable pricing matrix above, (ii) the Stated Amount in effect as of the Second Amendment Effective Date and (iii) a fraction, the numerator of which is equal to the number of days from and including the date of such termination or replacement to and including February 21, 2025, and the denominator of which is 360, and (B) any amount paid to the Bank pursuant to Section 1.5(b) hereof (the “*Termination Fee*”), payable on the date of such termination or replacement; *provided, however,* that no such Termination Fee shall be payable if (i) the short-term unenhanced ratings of the Bank are reduced below “*P-1*” (or its equivalent), “*A-1*” (or its equivalent) or “*F1*” (or its equivalent), by any two of Moody’s, S&P or Fitch, respectively; (ii) the Notes are refinanced in full from the proceeds of fixed rate long-term debt issuance or a source of funds which, in either case, does not involve the issuance by a bank or other financial institution of a letter of credit, liquidity facility, or credit facility or a direct purchase of such debt by a bank or other financial institution; or (iii) the Bank imposes on SMUD increased costs pursuant to Section 2.14 of the Agreement; *provided* that this clause (iii) shall not be construed to relieve SMUD of any of its obligations under Section 2.14 of the Agreement.

(b) Notwithstanding the foregoing and anything set forth herein or in the Agreement to the contrary, SMUD agrees not to permanently reduce the Stated Amount below the Stated Amount in effect as of the Second Amendment Effective Date prior to February 21, 2025, without the payment by SMUD to the Bank of a reduction fee in connection with each and every permanent reduction of the Stated Amount in an amount equal to the product of (i) the Letter of Credit Fee Rate in effect under the applicable pricing matrix above on the date of such reduction, (ii) the difference between the Stated Amount (without regard to any reduction of the Stated Amount subject to reinstatement) prior to such reduction and the Stated Amount (without regard to any reduction of the Stated Amount subject to reinstatement) after such reduction, and (iii) a fraction, the numerator of which is equal to the number of days from and including the date of such reduction to and including February 21, 2025, and the denominator of which is 360 (the “*Reduction Fee*”); *provided, however,* that no such Reduction Fee shall be payable if (i) the short-term unenhanced ratings of the Bank are reduced below “*P-1*” (or its equivalent), “*A-1*” (or its equivalent) or “*F1*” (or its equivalent), by any two of Moody’s, S&P or Fitch, respectively; (ii) the Notes are refinanced in full from the proceeds of fixed rate long-term debt issuance or a source of funds which, in either case, does not involve the issuance by a bank or other financial

institution of a letter of credit, liquidity facility, or credit facility or a direct purchase of such debt by a bank or other financial institution; or (iii) the Bank imposes on SMUD increased costs pursuant to Section 2.14 of the Agreement; *provided* that this clause (iii) shall not be construed to relieve SMUD of any of its obligations under Section 2.14 of the Agreement.

ARTICLE II. MISCELLANEOUS.

Section 2.1. Amendments. No amendment to this Fee Letter shall become effective without the prior written consent of SMUD and the Bank.

Section 2.2. Governing Law. PURSUANT TO SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW (OR ANY SUCCESSOR STATUTE THERETO), THIS FEE LETTER SHALL BE DEEMED TO BE A CONTRACT UNDER, AND SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK AND APPLICABLE FEDERAL LAW; *PROVIDED, HOWEVER*, THAT THE CAPACITY, POWER AND AUTHORITY OF SMUD TO ENTER INTO THIS FEE LETTER AND THE OBLIGATIONS OF SMUD HEREUNDER SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA AND APPLICABLE FEDERAL LAW WITHOUT REGARD TO CHOICE OF LAW RULES.

Section 2.3. Counterparts. This Fee Letter may be executed in two or more counterparts, each of which shall constitute an original but both or all of which, when taken together, shall constitute but one instrument. Delivery of an executed counterpart of a signature page of this Fee Letter by facsimile transmission or by e-mail with a pdf copy or other replicating image attached, will be effective as delivery of a manually executed counterpart of this Fee Letter, and any printed or copied version of any signature page so delivered will have the same force and effect as an originally signed version of such signature page.

Section 2.4. Severability. Any provision of this Fee Letter which is prohibited, unenforceable or not authorized in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition, unenforceability or non-authorization without invalidating the remaining provisions hereof or affecting the validity, enforceability or legality of such provision in any other jurisdiction.

Section 2.6. Amendment and Restatement. This Fee Letter amends and restates in its entirety the Existing Fee Letter but is not intended to be or operate as a novation or an accord and satisfaction of the Existing Fee Letter or the indebtedness, obligations and liabilities of SMUD evidenced or provided for thereunder. Reference to this specific Fee Letter need not be made in any agreement, document, instrument, letter or certificate, the Existing Fee Letter itself or any communication issued or made pursuant to or with respect to the Existing Fee Letter, any reference to the Existing Fee Letter being sufficient to refer to the Existing Fee Letter as amended and restated hereby, and more specifically, any and all references to the Fee Letter in the Agreement shall mean this Fee Letter.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have caused this Second Amended and Restated Fee Letter to be duly executed and delivered by their respective officers thereunto duly authorized as of the date first set forth above.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Name: Russell Mills
Title: Treasurer

BANK OF AMERICA, N.A.

By: _____
Name: Brent Riley
Title: Senior Vice President

SECOND AMENDMENT TO DEALER AGREEMENT

THIS SECOND AMENDMENT TO DEALER AGREEMENT (this “Second Amendment”) is entered into [Closing Date], by and between the Sacramento Municipal Utility District, a political subdivision of the State of California (“SMUD”), duly organized and validly existing pursuant to the Municipal Utility District Act as contained in California Public Utilities Code Section 11501 *et seq.* (the “Act”), and BofA Securities, Inc. (the “Dealer”).

RECITALS

SMUD and the Dealer previously entered into that certain Dealer Agreement, dated February 28, 2019 (the “Original Agreement”) relating to the issuance and reissuance of SMUD’s Commercial Paper Notes, Series M consisting of the Subseries M-1 Notes and the Subseries M-2 Notes (collectively, the “Notes”) in an aggregate principal amount not to exceed \$111,250,000 at any time outstanding.

SMUD previously increased the authorized aggregate principal amount of the Notes to be outstanding at any time from \$111,250,000 to \$150,000,000.

SMUD and the Dealer previously entered into that certain First Amendment to Dealer Agreement, dated February 23, 2022 (the “First Amendment” and, together with the Original Agreement, the “Agreement”) to make certain amendments to the Original Agreement as provided in the First Amendment.

SMUD has increased the authorized aggregate principal amount of the Notes to be outstanding at any time from \$150,000,000 to \$250,000,000.

SMUD and the Dealer now desire to make certain amendments to the Agreement as provided in this Second Amendment.

AGREEMENTS

NOW THEREFORE, for and in consideration of the covenants herein made, and subject to the conditions herein set forth, the parties hereto agree as follows:

Section 1. Definitions. Unless the context clearly indicates a contrary meaning, each capitalized term used in this Second Amendment shall have the meaning given to that term in the Agreement.

Section 2. Amendment of Agreement.

(a) All references in the Agreement (including the exhibits thereto) to \$150,000,000 in respect of the Notes are hereby amended to read \$250,000,000.

(b) Pursuant to Section 8 of the Agreement, SMUD hereby notifies the Dealer that the Note Resolution has been amended by Resolution No. 24-02-[], adopted by SMUD on February 15, 2024, the Agreement has been amended by this Second Amendment and the Letter of Credit has been amended by a Second Amendment thereto, dated [Closing Date], all such

amendments to become effective concurrently with the execution and delivery of this Second Amendment.

Section 3. Counterparts. This Second Amendment may be executed in several counterparts, each of which shall be regarded as an original but all of which shall constitute one and the same document.

Section 4. Governing Law. This Second Amendment shall be governed by, and construed in accordance with, the laws of the State of California.

Section 5. Headings. The section headings hereof have been inserted for convenience of reference only, shall not be part of this Second Amendment, and shall not be used to construe, define, limit or interpret the meaning of any provision hereof.

Section 6. Severability. If any provision of this Second Amendment shall be held or deemed by a court of competent jurisdiction to be invalid, inoperative or unenforceable for any reason, such determination shall not affect the validity or enforceability of the remaining provisions hereof.

Section 7. Miscellaneous. Except as specifically amended by this Second Amendment, the Agreement shall continue in full force and effect in accordance with its terms.

IN WITNESS WHEREOF, the parties hereto have caused this Second Amendment to be executed and delivered as of the date first above written.

SACRAMENTO MUNICIPAL
UTILITY DISTRICT

By: _____
Treasurer

BOFA SECURITIES, INC.

By: _____
Authorized Representative



COMMERCIAL PAPER MEMORANDUM

**Sacramento Municipal Utility District, California
Commercial Paper Notes, Series M
Consisting of:**

Subseries M-1

**Subseries M-2
(Federally Taxable)**

This Commercial Paper Memorandum contains certain information for general reference only; it is not a summary of the terms of the Sacramento Municipal Utility District, California Commercial Paper Notes, Series M consisting of the above-described subseries (collectively, the “Notes”). Information essential to the making of an informed decision with respect to the Notes may be obtained in the manner described herein under “Additional Information.” All references to the documents and other materials not purporting to be quoted in full are qualified in their entirety by reference to the complete provisions of the documents and other materials referenced which may be obtained in the manner described herein under “Additional Information.” The information in this Commercial Paper Memorandum is subject to change without notice after [Closing Date] and future use of this Commercial Paper Memorandum shall not otherwise create any implication that there has been no change in the matters referred to in this Commercial Paper Memorandum since [Closing Date].

The Notes have not been registered under the Securities Act of 1933, as amended (the “Act”) in reliance upon an exemption from registration contained in the Act.

The ratings presented in this Commercial Paper Memorandum are only accurate as of the date set forth above, and do not reflect watch status, if any. The ratings may subsequently be changed or withdrawn, and, therefore, any prospective purchaser should confirm the ratings prior to purchasing the Notes.

Although the information in this Commercial Paper Memorandum is believed to be accurate, the Dealer (defined herein) does not represent that such information is accurate and complete, and it should not be relied upon as such. Neither the information nor any opinion contained or expressed herein constitutes a solicitation by the Dealer of the purchase or sale of any instruments. The information contained herein will not typically be distributed or updated upon each new sale of any Notes, although such information will be distributed from time to time. Further, the information in this Commercial Paper Memorandum is not intended as a substitute for the investors’ own inquiry into the creditworthiness of the Bank (defined herein) that has issued the Letter of Credit (defined herein), and investors are encouraged to make such inquiry.

The Bank (defined herein) has no responsibility for the form and content of this Commercial Paper Memorandum, other than solely with respect to the information describing itself under the heading “THE BANK”, and has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Commercial Paper Memorandum or any information or disclosure contained herein or omitted herefrom, other than solely with respect to the information describing itself under the heading “THE BANK”.

BofA Securities

SUMMARY

The Sacramento Municipal Utility District (“SMUD”) was formed by vote of the electors in 1923 under provisions of the California Municipal Utility District Act (Division 6 of the California Public Utilities Code) (the “Act”). The Act provides SMUD with broad powers to acquire, construct, own and operate works for the supplying of light, water, heat, power, communications, transportation and other services for its inhabitants. The Act also confers upon SMUD the necessary rights and powers for the conduct of business, including the right to sue and be sued, to exercise the power of eminent domain, to enter into contracts of all kinds, to take property and construct works, to fix rates and charges for commodities or services furnished, to incur indebtedness and issue bonds or other obligations and to invest its funds.

SMUD owns and operates an integrated electric system that includes generation, transmission and distribution facilities. SMUD’s headquarters are located in the city of Sacramento (the “City”) and its service area of approximately 900 square miles includes the principal parts of Sacramento County and small portions of Placer and Yolo counties. The service area includes the state capital, the City, the populous areas principally to the northeast and south of the City and the agricultural areas to the north and south. The City is located 85 miles northeast of San Francisco.

The Commercial Paper Notes, Series M consisting of Subseries M-1 and Subseries M-2 (the “Subseries M-1 Notes” and the “Subseries M-2 Notes” and, collectively, the “Notes”) are secured by a pledge of Available Revenues as described herein and supported by an irrevocable, transferable, direct-pay letter of credit, as amended (the “Letter of Credit”) in substantially the form attached hereto as Appendix A and issued by Bank of America, N.A. (the “Bank”) pursuant to a Reimbursement Agreement between SMUD and the Bank, dated as of February 1, 2019, as amended (the “Reimbursement Agreement”). The Bank has issued the Letter of Credit in the aggregate maximum stated amount of \$256,164,384 (consisting of \$250,000,000 principal plus ninety (90) days interest calculated at a rate of 10% per annum assuming a 365-day year). The Notes will be issued in book-entry form through The Depository Trust Company, New York, New York (“DTC”). See “The Commercial Paper Notes” herein.

This material relating to SMUD is for general informational purposes. While SMUD considers the material relating to SMUD reliable, SMUD does not represent that it is a complete and accurate disclosure of the facts pertaining to SMUD. Investors are expected to base their investment decisions solely on the liquidity and credit support provided by the Bank, rather than the financial and operating history of SMUD, which this Commercial Paper Memorandum does not purport to fully disclose. Additional information about SMUD is available from the Municipal Securities Rulemaking Board’s (the “MSRB”) Electronic Municipal Access System (“EMMA”). See also “Additional Information” herein.

If for any reason the Bank fails to honor a properly presented and conforming drawing under the Letter of Credit, SMUD cannot provide any assurance that it will have sufficient funds on hand and available to make such payment of principal of and/or interest on the Notes supported by the Letter of Credit or to make such payments in a timely manner.

Prospective investors should therefore base their investment decision primarily on the credit of the Bank, rather than on that of SMUD.

BofA Securities, Inc., as dealer of the Notes (the “Dealer”) has provided the following sentence for inclusion in this Commercial Paper Memorandum. The Dealer has reviewed the information in this Commercial Paper Memorandum in accordance with, and as part of, its responsibilities to investors under the federal securities law as applied to the facts and circumstances of this transaction, but the Dealer does not guarantee the accuracy or completeness of such information.

THE COMMERCIAL PAPER NOTES

SMUD is issuing the Notes pursuant to (a) Articles 6a and 6b of Chapter 6 of the Act (California Public Utilities Code Section 12850 et seq.), (b) Chapter 7.5 of the Act (California Public Utilities Code Section 13371 et seq.) and (c) Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (California Government Code Section 53580 et seq.). Resolution No. 19-02-02 of SMUD, adopted on February 21, 2019, as supplemented and amended by Resolution No. 22-02-06 of SMUD, adopted on February 17, 2022, and by Resolution No. 24-02-[] of SMUD, adopted on February 15, 2024 (collectively, the “Resolution”), provides that Notes may be outstanding in an aggregate principal amount that does not exceed \$250,000,000. The proceeds of the Notes may be used by SMUD to finance or refinance capital improvements, certain costs associated with the purchase of fuel, facilities design, site preparation, the acquisition of equipment, and to pay maturing Notes.

The Notes are secured by a pledge of Available Revenues and supported by the Letter of Credit. The Letter of Credit has been issued pursuant to the Reimbursement Agreement. Available Revenues of SMUD are composed of net revenues of SMUD after payment of operating, maintenance, and purchased power expenses, Rate Stabilization Fund deposits, and debt service and reserves on SMUD’s Electric Revenue Bonds and Subordinated Electric Revenue Bonds, all as provided in the Resolution.

The Notes will be issued as book-entry obligations evidenced by a master note registered in the name of DTC or its nominee. The Notes may be issued in denominations of \$100,000 and any integral multiple of \$1,000 in excess of \$100,000, with interest payable at maturity, and shall mature on such dates as SMUD may establish, provided that no Note shall mature more than 270 days from the date of issuance thereof. Subseries M-1 Notes shall bear interest on the basis of a 365- or 366-day year, as applicable, and the actual number of days elapsed and Subseries M-2 Notes shall bear interest on the basis of a 360-day year and the actual number of days elapsed. The Notes are payable at the principal office of U.S. Bank Trust Company, National Association, successor in interest to U.S. Bank National Association (the “Depository”).

Pursuant to the Depository Agreement relating to the Notes, dated February 28, 2019 (the “Depository Agreement”), between SMUD and the Depository, the Depository is not permitted to authenticate and deliver any Note if, immediately after the authentication and delivery thereof, the aggregate face amount of the Outstanding Notes plus the maximum amount of interest which may accrue thereon would exceed the aggregate Letter of Credit Stated Amount

(defined herein). SMUD has also covenanted in the Resolution not to issue any Note if, after its issuance, the outstanding principal amount of all Notes as well as interest to accrue on such Notes would exceed the then current Letter of Credit Stated Amount. See “Bank Credit Arrangement” herein.

BANK CREDIT ARRANGEMENT

Stated Amount and Term of the Letter of Credit. Pursuant to the Reimbursement Agreement, the Bank has issued to the Depository the Letter of Credit in the aggregate maximum stated amount of \$256,164,384 (consisting of \$250,000,000 principal plus 90 days interest calculated at a rate of 10% per annum assuming a 365-day year) as reduced and reinstated from time to time in accordance with terms of the Letter of Credit (the “Letter of Credit Stated Amount”). The Letter of Credit’s stated expiration date is February [], 20[], unless earlier terminated in accordance with its terms, and unless such expiration date is extended by the Bank in accordance with the terms of the Reimbursement Agreement.

Drawings under the Letter of Credit. The Depository is authorized to make drawings under the Letter of Credit in accordance with its terms. If demand for payment under the Letter of Credit is properly presented as provided therein and in conformity with the requirements thereof, payment shall be made by the Bank to the Depository, in immediately available funds, at such times as provided in and in accordance with the provisions of the Letter of Credit. All payments made by the Bank under the Letter of Credit shall be made with the Bank’s own funds.

If for any reason the Bank fails to honor a properly presented and conforming drawing under the Letter of Credit, SMUD cannot provide any assurance that it will have sufficient funds on hand and available to make such payment of principal of and/or interest on the Notes supported by the Letter of Credit or to make such payments in a timely manner. Prospective investors should therefore base their investment decision primarily on the credit of the Bank, rather than on that of SMUD.

Reimbursement of Drawings under the Letter of Credit. Drawings made under the Letter of Credit to pay interest due on the Notes are required to be reimbursed by SMUD on the date of such drawing. Drawings made under the Letter of Credit to pay the principal of the Notes if not reimbursed by SMUD in full on the date of such drawing will, subject to the satisfaction of certain conditions of the Reimbursement Agreement, automatically convert to and constitute an advance made by the Bank to SMUD (an “Advance”) to be paid in installments on (a) the first business day to occur on or after the six (6) month anniversary of the date the related Advance is made and the first business day of each sixth (6th) calendar month occurring thereafter prior to the related Amortization End Date and (b) the related Amortization End Date. The “Amortization End Date” means, with respect to any Advance, the earliest to occur of: (i) the fifth (5th) anniversary of the date on which the related Advance was made, (ii) the date on which an Alternate Letter of Credit (defined herein) becomes effective in substitution of the Letter of Credit with respect to the Notes, and (iii) the date on which the Letter of Credit Stated Amount is permanently reduced to zero or the Letter of Credit is otherwise terminated in accordance with its terms prior to its stated expiration date.

Events of Default under the Reimbursement Agreement. The Reimbursement Agreement contains certain events of default by SMUD, including, but not limited to, an event of default under the Program Documents, the Master Bond Resolution or the Subordinate Bond Resolution (each as defined in the Reimbursement Agreement), a failure by SMUD to reimburse the Bank for a drawing under the Letter of Credit when due under the terms of the Reimbursement Agreement or a payment default or certain other defaults with respect to certain other obligations of SMUD, subject to such grace periods as are provided for in the Reimbursement Agreement, material misrepresentation or breach of covenant by SMUD, subject to such grace periods as are provided for in the Reimbursement Agreement, voluntary or involuntary bankruptcy or insolvency of SMUD, or the downgrade by any Rating Agency (as defined in the Reimbursement Agreement) of its long-term unenhanced rating with respect to any Bonds (as defined in the Reimbursement Agreement) to a level below “Baa3” (or its equivalent) in the case of Moody’s Investors Service, Inc., “BBB-” (or its equivalent) in the case of Standard & Poor’s Ratings Services or “BBB-” (or its equivalent) in the case of Fitch, Inc.

Remedies under the Reimbursement Agreement. Upon the occurrence and continuance of an event of default under the Reimbursement Agreement, the Bank may, but is not obligated to (i) declare all Obligations (as defined in the Reimbursement Agreement) to be immediately due and payable, (ii) deliver to the Depository a “No-Issuance Notice” under the terms of the Letter of Credit, directing that no additional Notes be issued under the Note Resolution, and reduce the Letter of Credit Stated Amount to the amount of the then outstanding Notes supported by the Letter of Credit and/or terminate the Letter of Credit Stated Amount as the then outstanding Notes are paid, (iii) issue the “Final Drawing Notice” to the Depository, the effect of which shall be to cause the termination of the Letter of Credit to occur on the 15th day after the date of receipt thereof by the Depository or (iv) pursue such other remedies as are available to it at law or in equity.

Upon the issuance of a Final Drawing Notice by the Bank, the Depository is required to draw upon the Letter of Credit in an amount sufficient to pay the principal of and interest on the Notes then outstanding as the same become due.

ALTERNATE LETTER OF CREDIT

Pursuant to the terms of the Resolution, SMUD may elect to replace the Letter of Credit with one or more letters of credit issued by a commercial bank or financial institution (or a syndicate of such institutions acting jointly or severally), delivered to the Depository pursuant to the Depository Agreement and conforming to the requirements of the Resolution (the “Alternate Letter of Credit”). SMUD shall give written notice of its intention to exercise such election to the Depository, not fewer than ten (10) days prior to the proposed date upon which an Alternate Letter of Credit is to become effective (the “Substitution Date”). No substitution of an Alternate Letter of Credit for the Letter of Credit shall occur unless all Notes outstanding on the Substitution Date are either (1) paid from the proceeds of the Notes issued on the Substitution Date or (2) paid from the proceeds of a drawing under the Letter of Credit and cancelled.

THE BANK

[Update to be provided by Bank and/or Bank Counsel]

The following information concerning the Bank has been provided by representatives of the Bank and has not been independently confirmed or verified by the Dealer or SMUD. No representation is made herein as to the accuracy or adequacy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof, or that the information given below or incorporated herein by reference is correct as of any time subsequent to its date.

Bank of America, N.A. (the “Bank”) is a national banking association organized under the laws of the United States, with its principal executive offices located in Charlotte, North Carolina. The Bank is a wholly-owned indirect subsidiary of Bank of America Corporation (the “Corporation”) and is engaged in a general consumer banking, commercial banking and trust business, offering a wide range of commercial, corporate, international, financial market, retail and fiduciary banking services. As of September 30, 2021, the Bank had consolidated assets of \$2.401 trillion, consolidated deposits of \$2.033 trillion and stockholder’s equity of \$228.382 billion based on regulatory accounting principles.

The Corporation is a bank holding company and a financial holding company, with its principal executive offices located in Charlotte, North Carolina. Additional information regarding the Corporation is set forth in its Annual Report on Form 10-K for the fiscal year ended December 31, 2020, together with its subsequent periodic and current reports filed with the Securities and Exchange Commission (the “SEC”).

The SEC maintains a website at www.sec.gov which contains the filings that the Corporation files with the SEC such as reports, proxy statements and other documentation. The reports, proxy statements and other information the Corporation files with the SEC are also available at its website, www.bankofamerica.com.

The information concerning the Corporation and the Bank is furnished solely to provide limited introductory information and does not purport to be comprehensive. Such information is qualified in its entirety by the detailed information appearing in the referenced documents and financial statements referenced therein.

The Bank will provide copies of the most recent Bank of America Corporation Annual Report on Form 10-K, any subsequent reports on Form 10-Q, and any required reports on Form 8-K (in each case, as filed with the SEC pursuant to the Securities Exchange Act of 1934, as amended), and the publicly available portions of the most recent quarterly Call Report of the Bank delivered to the Comptroller of the Currency, without charge, to each person to whom this document is delivered, on the written request of such person. Written requests should be directed to:

Bank of America Corporation
Office of the Corporate Secretary/Shareholder Relations
One Bank of America Center

150 N College St., NC1-028-28-03
Charlotte, NC 28255

PAYMENTS OF PRINCIPAL AND INTEREST ON THE NOTES WILL BE MADE FROM DRAWINGS UNDER THE LETTER OF CREDIT. ALTHOUGH THE LETTER OF CREDIT IS A BINDING OBLIGATION OF THE BANK, THE NOTES ARE NOT DEPOSITS OR OBLIGATIONS OF THE CORPORATION OR ANY OF ITS AFFILIATED BANKS AND ARE NOT GUARANTEED BY ANY OF THESE ENTITIES. THE NOTES ARE NOT INSURED BY THE FEDERAL DEPOSIT INSURANCE CORPORATION OR ANY OTHER GOVERNMENTAL AGENCY AND ARE SUBJECT TO CERTAIN INVESTMENT RISKS, INCLUDING POSSIBLE LOSS OF THE PRINCIPAL AMOUNT INVESTED.

The delivery of this information shall not create any implication that there has been no change in the affairs of the Corporation or the Bank since the date of the most recent filings referenced herein, or that the information contained or referred to under this heading is correct as of any time subsequent to the referenced date.

THE DEALER

SMUD has appointed BofA Securities, Inc. (the “Dealer”) as a dealer for SMUD in connection with the offering, issuance and sale of the Notes pursuant to a Dealer Agreement, dated February 28, 2019, as amended (the “Dealer Agreement”), between SMUD and the Dealer. In consideration of the services to be performed by the Dealer under the Dealer Agreement, SMUD agrees to pay to the Dealer a fee in an amount as set forth in the Dealer Agreement.

The Dealer Agreement may be terminated by the Dealer or SMUD at any time on written notice given no less than ten (10) business days prior to such termination date; provided, however, that upon the mutual agreement, such written notice may be given fewer than ten (10) business days prior to such termination date.

The Dealer, in its individual capacity, may in good faith buy, sell, own, hold and deal in any of the Notes, including, without limitation, any Notes offered and sold by the Dealer pursuant to the Dealer Agreement, and may join in any action which any owner of the Notes may be entitled to take with like effect as if it did not act in any capacity under such Agreement. The Dealer may sell any of the Notes in the secondary market at prices above or below par, at any time. The Dealer, however, is not obligated to purchase any Notes for its own account at any time. The Dealer, in its individual capacity, either as principal or agent, and its affiliates may also engage in or be interested in any financial or other transaction with SMUD and may act as depositary, account party, or agent for any committee or body of owners of the Notes or other obligations of SMUD as freely as if it did not act in any capacity under the Dealer Agreement.

The Dealer and its affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Under certain circumstances, the Dealer and its affiliates may have certain creditor and/or other rights against SMUD in connection with such activities. In the various course of their various business

activities, the Dealer and its affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of SMUD (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with SMUD. The Dealer and its affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

The Dealer, which is serving as the dealer for the Notes, and the Bank, which is providing the Letter of Credit for the Notes, are affiliates. The activities of the Dealer and the Bank are unrelated to and independent of each other. By purchasing a Note, the purchaser thereof consents to any conflict of interest that could exist by reason of the different capacities in which the Dealer, the Bank and any other potential affiliate provides services in connection with the Notes.

The Dealer and its affiliates, including the Bank, may provide services to SMUD from time to time unrelated to the offering of the Notes.

TAX MATTERS

Subseries M-1 Notes

In the opinion of Orrick, Herrington & Sutcliffe LLP, bond counsel to SMUD (“Bond Counsel”), based upon an analysis of existing laws, regulations, rulings, and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Subseries M-1 Notes will be excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the “Code”) and will be exempt from State of California personal income taxes. Bond Counsel is of the further opinion that interest on the Subseries M-1 Notes will not be a specific preference item for purposes of the federal individual alternative minimum tax. Bond Counsel observes that interest on the Subseries M-1 Notes included in adjusted financial statement income of certain corporations will not be excluded from the federal corporate alternative minimum tax. The amount treated as interest on the Subseries M-1 Notes and excluded from gross income will depend upon the taxpayer’s election under Internal Revenue Notice 94-84. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Subseries M-1 Notes. A complete copy of the proposed form of opinion of Bond Counsel is set forth in Appendix B.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Subseries M-1 Notes. SMUD has made certain representations and covenanted to comply with certain restrictions, conditions and requirements designed to ensure that interest on the Subseries M-1 Notes will not be included in federal gross income. Inaccuracy of these

representations or failure to comply with these covenants may result in interest on the Subseries M-1 Notes being included in gross income for federal income tax purposes, possibly from the date of original issuance of the Subseries M-1 Notes. The opinion of Bond Counsel assumes the accuracy of these representations and compliance with these covenants. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken) or events occurring (or not occurring), or any other matters coming to Bond Counsel's attention after the date of issuance of the Subseries M-1 Notes may adversely affect the value of, or the tax status of interest on, the Subseries M-1 Notes. Accordingly, the opinion of Bond Counsel is not intended to, and may not, be relied upon in connection with any such actions, events or matters.

Although Bond Counsel is of the opinion that interest on the Subseries M-1 Notes will be excluded from gross income for federal income tax purposes and will be exempt from State of California personal income taxes, the ownership or disposition of, or the accrual or receipt of amounts treated as interest on, the Subseries M-1 Notes may otherwise affect a beneficial owner's federal, state or local tax liability. The nature and extent of these other tax consequences will depend upon the particular tax status of the beneficial owner or the beneficial owner's other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the Subseries M-1 Notes to be subject, directly or indirectly, in whole or in part, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent beneficial owners from realizing the full current benefit of the tax status of such interest. The introduction or enactment of any such legislative proposals or clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the Subseries M-1 Notes. Prospective purchasers of the Subseries M-1 Notes should consult their own tax advisors regarding the potential impact of any pending or proposed federal or state tax legislation, regulations or litigation, and regarding the impact of future legislation, regulations or litigation, as to which Bond Counsel expresses no opinion.

The opinion of Bond Counsel is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the Subseries M-1 Notes for federal income tax purposes. It is not binding on the Internal Revenue Service ("IRS") or the courts. Furthermore, Bond Counsel cannot give and has not given any opinion or assurance about the future activities of SMUD, or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. SMUD has covenanted, however, to comply with the requirements of the Code.

Bond Counsel's engagement with respect to the Subseries M-1 Notes ends with the delivery of its opinion, and, unless separately engaged, Bond Counsel is not obligated to defend SMUD or the beneficial owners regarding the tax-exempt status of the Subseries M-1 Notes in the event of an audit examination by the IRS. Under current procedures, beneficial owners would have little, if any, right to participate in the audit examination process. Moreover, because achieving judicial review in connection with an audit examination of tax-exempt obligations is

difficult, obtaining an independent review of IRS positions with which SMUD legitimately disagrees, may not be practicable. Any action of the IRS, including but not limited to selection of the Subseries M-1 Notes for audit, or the course or result of such audit, or an audit of obligations presenting similar tax issues may affect the market price for, or the marketability of, the Subseries M-1 Notes, and may cause SMUD or the beneficial owners to incur significant expense.

Payments on the Subseries M-1 Notes generally will be subject to U.S. information reporting and possibly to “backup withholding.” Under Section 3406 of the Code and applicable U.S. Treasury Regulations issued thereunder, a non-corporate beneficial owner of Subseries M-1 Notes may be subject to backup withholding with respect to “reportable payments,” which include interest paid on the Subseries M-1 Notes and the gross proceeds of a sale, exchange, redemption, retirement or other disposition of the Subseries M-1 Notes. The payor will be required to deduct and withhold the prescribed amounts if (i) the payee fails to furnish a U.S. taxpayer identification number (“TIN”) to the payor in the manner required, (ii) the IRS notifies the payor that the TIN furnished by the payee is incorrect, (iii) there has been a “notified payee underreporting” described in Section 3406(c) of the Code or (iv) the payee fails to certify under penalty of perjury that the payee is not subject to withholding under Section 3406(a)(1)(C) of the Code. Amounts withheld under the backup withholding rules may be refunded or credited against a beneficial owner’s federal income tax liability, if any, provided that the required information is timely furnished to the IRS. Certain beneficial owners (including among others, corporations and certain tax-exempt organizations) are not subject to backup withholding. The failure to comply with the backup withholding rules may result in the imposition of penalties by the IRS.

Subseries M-2 Notes

State of California Income Tax Considerations. In the opinion of Bond Counsel, interest on the Subseries M-2 Notes is exempt from State of California personal income taxes.

Certain United States Federal Tax Considerations. Interest on the Subseries M-2 Notes is not excluded from gross income for federal income tax purposes.

Prospective investors that are not individuals or regular C corporations who are U.S. persons purchasing the Subseries M-2 Notes for investment should consult their own tax advisors as to any tax consequences to them from the purchase, ownership and disposition of the Subseries M-2 Notes.

RATINGS

Each rating below reflects only the view of the ratings service issuing such rating and is not a recommendation by such rating services to purchase, sell or hold the obligations to which such rating applies or as to the market price or suitability of such obligations for a particular investor. An explanation of the significance of a rating may be obtained from the ratings service issuing such rating. There is no assurance that any rating will continue for any period of time or

that it will not be revised or withdrawn. A revision or withdrawal of a rating may have an effect on the market price of the obligation to which such rating applies.

[Ratings to be confirmed]

SMUD Commercial Paper Notes:	SMUD Electric Revenue Bonds:
(Short-Term Ratings)	(Long-Term Ratings)
A-1 (Standard & Poor's Ratings Services)	Aa3 (Moody's Investors Service, Inc.)
F1+ (Fitch, Inc.)	AA (Standard & Poor's Ratings Services)
	AA (Fitch, Inc.)

DTC'S BOOK-ENTRY SYSTEM

Each subseries of the Notes will be evidenced by a single master note (each a "Master Note" and, collectively, the "Master Notes") registered in the name of a nominee of DTC. The Master Notes will be deposited with the Depository as custodian for DTC. DTC will record, by appropriate entries on its book-entry registration and transfer system, the amounts payable in respect of the Notes. Payments by DTC participants to purchasers for whom a DTC participant is acting as agent in respect of Notes will be governed by the standing instructions and customary practices under which securities are held at DTC through DTC participants.

LITIGATION

There is no litigation now pending or, to the knowledge of SMUD, threatened against SMUD which restrains or enjoins the issuance or delivery of the Notes or the use of the proceeds of the Notes or which questions or contests the validity of the Notes or the proceedings and authority under which they are to be issued, executed and delivered. To the knowledge of SMUD, neither the creation, organization, nor existence of SMUD, nor the title of the present members or other officials of SMUD to their respective offices, is being currently contested or questioned.

CERTAIN LEGAL MATTERS

The validity of the Notes and certain other legal matters are subject to the approving opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD. A complete copy of the proposed form of Bond Counsel opinion is contained in Appendix B. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Commercial Paper Memorandum. Certain legal matters will be passed upon for the Bank by Chapman and Cutler LLP.

ADDITIONAL INFORMATION

No attempt is made herein to summarize the Resolution, the Depository Agreement, the Reimbursement Agreement, the Dealer Agreement or the Letter of Credit. Copies of the Resolution, the Depository Agreement, the Reimbursement Agreement, the Dealer Agreement

and the Letter of Credit are on file with the Depository and SMUD will make available upon request copies of the Resolution, the Depository Agreement, the Reimbursement Agreement, the Dealer Agreement and the Letter of Credit. A form of the Letter of Credit is attached hereto as Appendix A. SMUD is not required to file reports with the MSRB or the SEC related to its issuance of the Notes, but will make available, upon request, copies of its most recent Annual Report, Official Statement and the Resolution. Requests for any of this information should be directed to: Sacramento Municipal Utility District, P.O. Box 15830, Sacramento, CA 95852-1830, Attention: Treasury Department, MS B405, (916) 732-5670. In addition, SMUD has several other outstanding debt issues for which it has entered into agreements (the “Continuing Disclosure Agreements”) to file certain annual financial information and operating data and its audited financial statements with EMMA. The Continuing Disclosure Agreements may be terminated or amended pursuant to their respective terms without the necessity of obtaining the consent of any holders of the Notes. The Continuing Disclosure Agreements are solely for the benefit of the holders of the related debt issues and the holders of the Notes have no right to enforce the provisions of the Continuing Disclosure Agreements. However, holders and potential purchasers of the Notes may access such information through EMMA, so long as SMUD is required to make such filings.

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APPENDIX A
FORM OF LETTER OF CREDIT

APPENDIX B

PROPOSED FORM OF OPINION OF BOND COUNSEL

[Closing Date]

Sacramento Municipal Utility District
Sacramento, California

Sacramento Municipal Utility District
Commercial Paper Notes, Series M
(Final Opinion)

Ladies and Gentlemen:

We have acted as bond counsel to the Sacramento Municipal Utility District (“SMUD”) in connection with the authorization of the issuance of up to \$250,000,000 aggregate principal amount (at any time Outstanding) of commercial paper notes by SMUD, pursuant to Resolution No. 19-02-02, adopted by SMUD on February 21, 2019, as supplemented by Resolution No. 22-02-06, adopted by SMUD on February 17, 2022, and by Resolution No. 24-02-[], adopted by SMUD on February 15, 2024 (collectively, the “Resolution”), and designated Sacramento Municipal Utility District Commercial Paper Notes, Subseries M-1 (the “Subseries M-1 Notes”) and Subseries M-2 (the “Subseries M-2 Notes” and, together with the Subseries M-1 Notes, the “Notes”). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Resolution.

In such connection, we have reviewed the Resolution; the Tax Certificate of SMUD, dated the date hereof (the “Tax Certificate”); the Depositary Agreement, dated February 28, 2019 (the “Depositary Agreement”), between SMUD and the Depositary; an opinion of counsel to SMUD; certificates of SMUD, the Depositary and others; and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after the date hereof and before or after Notes are issued. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after the date hereof. Accordingly, this letter speaks only as of its date and is not intended to, and may not, be relied upon or otherwise used in connection with any such actions, events or matters. We disclaim any obligation to update this letter. We have assumed the genuineness of all documents and signatures provided to us and the due and legal execution and delivery thereof by, and validity against, any parties other than SMUD. We have assumed, without undertaking to verify, the accuracy (as of the date hereof and as of each date of issuance from time to time of the Notes) of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinion, referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all covenants and agreements contained in the Resolution and the Tax Certificate, including (without limitation) covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the Subseries M-1 Notes to be included in gross income for federal income tax purposes, possibly retroactive to the date on

which the first Subseries M-1 Notes were issued. We call attention to the fact that the rights and obligations under the Notes, the Resolution and the Tax Certificate and their enforceability may be subject to bankruptcy, insolvency, receivership, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against governmental entities such as SMUD in the State of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinion with respect to the state or quality of title to or interest in any of the property described in or as subject to the lien of the Resolution or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such property. Our services did not include financial or other non-legal advice. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Commercial Paper Memorandum or other offering material relating to the Notes and express no view with respect thereto.

Based on and subject to the foregoing and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The Resolution has been duly adopted by SMUD and constitutes a valid and binding obligation of SMUD.

2. The Notes, when duly issued from time to time in the form authorized by and otherwise in compliance with the Resolution, executed by an Authorized Officer and authenticated by the Depository against payment therefor, will constitute the valid and binding limited obligations of SMUD.

3. Interest on the Subseries M-1 Notes, when issued in accordance with the Resolution and the Tax Certificate, will be excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986. The amount treated as interest on the Subseries M-1 Notes and excluded from gross income will depend on the taxpayer's election under Internal Revenue Service Notice 94-84. Interest on the Subseries M-1 Notes is not a specific preference item for purposes of the federal individual alternative minimum tax. We observe that interest on the Subseries M-1 Notes included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. Interest on the Notes, when issued in accordance with the Resolution and the Tax Certificate, is exempt from State of California personal income taxes. We observe that interest on the Subseries M-2 Notes is not excluded from gross income for federal income tax purposes. We express no opinion regarding other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Notes.

Faithfully yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

per

President Herber then called for statements from the public regarding items not on the agenda.

Michael Garabedian, with Placer County Tomorrow, spoke about the project he called the Regional University Project, which was going to the Placer County Board of Supervisors. He stated that Placer County's presentation on the item did not describe the environmental impacts that were problematic, and he stated that SMUD also did not present on those impacts during that meeting. He stated his concern with respect to Placer County lowering development standards through the region, despite the Placer County Conservation Plan.

Mr. Lau directed staff to meet with Mr. Garabedian to gain an understanding of the issue.

President Herber then turned to Directors' Reports.

Director Sanborn reported on her attendance at a Grid Alternatives project in Antelope where a customer received some assistance with regard to a solar and storage system on her home. She then reported on her attendance, along with President Herber, at the California Municipal Utilities Association (CMUA) Conference and her attendance at the grand opening of the Roseville Oaks Adolescent Outpatient Behavioral Health Center in Roseville. She concluded by reporting on a meeting with a friend who owns a paint recycling company who connected with the Sacramento Metropolitan Air Quality Management District (SMAQMD) and SMUD staff to look into getting more electric long-haul trucks brought to Sacramento.

Director Tamayo reported on his attendance at the Nurturing Talent, Building Futures apprenticeship event hosted at the SMUD Customer Service Center. He stated he had made comments at the Lunar New Year Festival event in Elk Grove organized by the Vietnamese American Community of Sacramento and the Northern California Vietnamese Chamber of Commerce. He concluded by thanking SMUD staff for a tutorial he had received with regard to the use of social media.

Director Kerth reported on his attendance at the annual installation dinner for the Sacramento Area Realtors Association as well as the installation dinner for the North State Building Industry Association. He concluded by reporting on his 2x2 meeting, along with President Herber, with the Sacramento Tree Foundation.

Vice President Fishman reported that he had emceed the annual Project R.I.D.E. crab feed fundraiser and had participated in the MLK Dinner at Sac State. He concluded by speaking about SMUD's quick response to the recent storm events and thanked staff for their work on repair of damages.

Director Rose reported on his attendance at the Napa-Solano Building Trades Annual Crab Feed, the CleanStart Long Duration Storage meeting, the Young Professionals in Energy Educational Panel at the Capitol, the Planning and Conservation League's (PCL's) Environmental Assembly, the Local Agency Formation Commission (LAFCo) Advisory Committee meeting, and the Single Mom Strong Career Exploration event. He then reported on his speaking engagement with the Slavic Chamber Business Workshop. He concluded by apologizing to those who had lost power during the recent storm and thanked staff for their work in getting power restored as quickly as possible.

President Herber reported on her speaking engagement at the Youth Rise event at the Design Tech High School in Rancho Cordova as well as her visit to the third grade class at Martin Luther King Elementary School. She reported on her attendance at the PCL Environmental Assembly and the CMUA Workshop. She then reported on her speaking engagements at the Asian Pacific Islander Desi American (APIDA) Lunar New Year awards luncheon and concluded by reporting on her attendance at the State of Public Safety address given by Sacramento County District Attorney Thien Ho.

Paul Lau, Chief Executive Officer and General Manager, reported on the following items:

- 1) **Storm Response.** As you know, the weather topped headlines across California last week. Our region was hit by more than eight hours of sustained wind with 65+ mph wind gusts, and I

think the last time we had something similar that was like last year was what we called the Great Storm of 2008. That kind of tells you, the last time we had something like that was 16 years ago. Now, we are having it last year, and we are having it this year. This storm knocked out 200,000 of our customers, out of the 650,000. So, I could not be more thankful. Our crews jumped into action as soon as the wind died down. Our Emergency Operations Center (EOC) was activated the day before, and with some great planning, I want to give special thanks to Chief Operating Officer Frankie McDermott and his team, we dispatched crews out of Oregon and California the day before to get them here so that as soon as the storm hits and as soon as we got ready to go out, we had fully staffed crews of 80 that were going out to restore power. Another thing I wanted to give thanks about is our Customer Services team did a wonderful job in terms of as soon as we found out that a customer was not going to be restored by nightfall, they called every single one of those customers and offered assistance where we could, and we did that every night for the four nights we had customers out. Within 24 hours, we were able to restore about 90 percent of the power. I want to give special thanks – I see Katarina Miletijev, our Director of Distribution Operations and Planning, and also you have Steve Hoyt who runs our Distribution Systems Operations with all dispatchers looking at dispatching all the crews, doing all of the switching, and I think they were up for 20 hours straight on the first night they were there, so a special thanks to those two sitting back there. I could not be more proud of our folks. Again, I appreciate what Director Rose said. I want to thank the public in terms of it is always very difficult when you lose power for a couple of days, and as Vice President Fishman said, this used

to be a very, very rare occurrence that we have customers out for a day or two. Obviously, from the January storm that we had last year and the February storm that we had this year, this getting to be I hope not a regular occurrence but certainly if you want to think about climate change here or not, at least from the local weather that we are seeing, the fact that climate change is impacting us.

- 2) **Upgraded Credit Rating.** Shifting gears to some good financial news -- Moody's Investor Service has upgraded our credit rating from Aa2 to Aa3. Our credit rating has been steadily climbing over the past 20 years, and this upgraded rating is the highest it has ever been with Moody's. Huge congratulations to everyone across the organization since we all play a role in keeping SMUD financially healthy. Everyone's collaborative work to ensure we keep the foresight in our budget for both long-term planning and emergency response – all while keeping rates affordable – is an incredible accomplishment. Thank you to all.
- 3) **Black History Month & Lunar New Year.** This month, we are also celebrating Black History Month and Lunar New Year at SMUD. Our Black Employees Resource Group hosted a touching and inspirational event celebrating the African American trailblazers who have paved the way here at SMUD. There were several honorees and special guests, and I have had the pleasure of working with all of the honorees through the years. And, our Groups Reaching Across International Networks (GRAIN) Employee Resource Group kicked off the Year of the Wood Dragon by gathering some employees for a dim sum feast at the restaurant Asian Pearl.
- 4) **SMUD Cares Appreciation Lunch.** Next week, we will be honoring our top volunteers and donors at our annual SMUD Cares Appreciation luncheon. In 2023, 775 volunteers

participated in 74 volunteer opportunities with SMUD Cares. These efforts resulted in over 2,000 volunteer hours. Also in 2023, employees pledged more than \$420,000 of their personal funds to support the nonprofit organizations they are passionate about. SMUD employees are the best at giving back to our community, but what impresses me the most is how our employees keep taking charitable giving – in dollars and volunteer hours -- to new heights.

5) **Board Video**. Tonight's video showcases our One SMUD response to restore power for our customers and community after the latest storm.

President Herber requested the Summary of Board Direction, but there were no items.

No further business appearing, President Herber adjourned the meeting in memory of community leader and former Sacramento City Councilwoman Lauren Hammond at 7:02 p.m.

Approved:

President

Secretary

Exhibit to Agenda Item #15

Authorize the Chief Executive Officer and General Manager to negotiate and execute a three-year contract renewal and expansion to \$250 million with **Bank of America, N.A. (BANA)** for a **Letter of Credit (BANA LOC)** that supports the outstanding **Commercial Paper Series M**, with terms substantially similar to the attached term sheet.

Board of Directors Meeting

Thursday, February 15, 2024, scheduled to begin at 6:00 p.m.

SMUD Headquarters Building, Auditorium

Commercial Paper Program Benefits

Benefits:

Flexibility to fund capital spending as it arises

- Access to capital in a shorter lead time than planning a bond sale
- Supports expanded capital spending in support of 2030 Zero Carbon Plan

Lower initial costs vs. long-term fixed rates

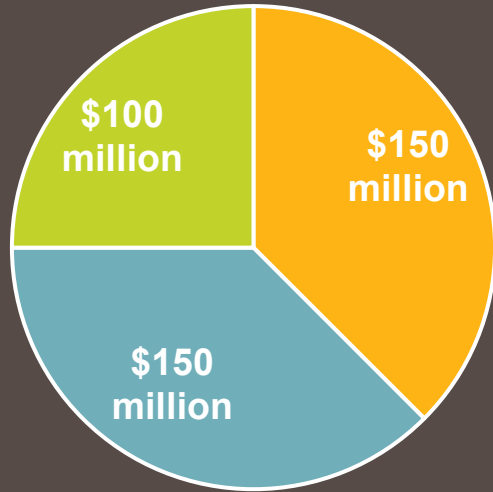
- Allows for market timing flexibility to refund with long term fixed-rate bonds
- Balances short-term borrowing costs with interest earnings

Additional liquidity viewed favorably by the ratings agencies

- Liquidity provides a form of reserve funding and self-insurance for unforeseen events
- AA rating enhanced with larger adjusted total liquidity sources (days cash + commercial paper)

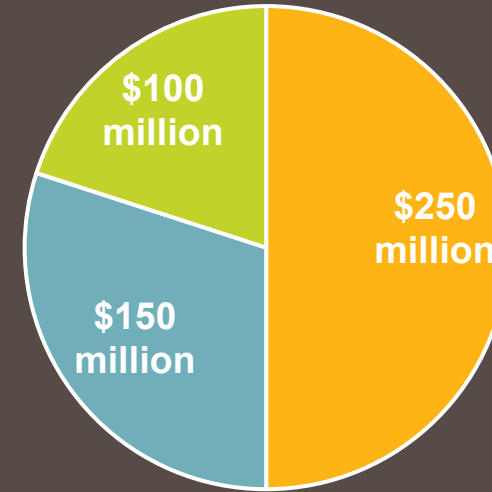
Current & Restructured Letter/Line of Credit Portfolio

Current: \$400 Million



■ Bank of America ■ Barclays ■ Wells Fargo

Proposed: \$500 Million



■ Bank of America ■ Barclays ■ Wells Fargo

Benefits to expansion:

- Greater capacity adds flexibility to manage short-term spending needs most efficiently
- Low cost for extra capacity .32%, provides cost effective access to liquidity for unplanned events
- Expansion enhances SMUD financial strength and ability to manage through financial headwinds
- Risk mitigation from pricing and renewal risk with a diversified and staggered credit facility program

Questions

SSS No. E,S RES 24-02

BOARD AGENDA ITEM STAFFING SUMMARY SHEET

Committee Meeting & Date Policy – 03/12/24
Board Meeting Date March 21, 2024

TO	TO
1. Claire Rogers	6.
2. Frankie McDermott	7.
3. Farres Everly	8.
4. Brandy Bolden	9. Legal
5. Suresh Kotha	10. CEO & General Manager

Consent Calendar	<input checked="" type="checkbox"/>	Yes		No <i>If no, schedule a dry run presentation.</i>	Budgeted	<input checked="" type="checkbox"/>	Yes	No <i>(If no, explain in Cost/Budgeted section.)</i>
FROM (IPR) Ellias van Ekelenburg	DEPARTMENT Env, Safety, and Real Estate Services			MAIL STOP B209	EXT. 7475	DATE SENT 02/14/2024		

NARRATIVE:

Requested Action: Accept the monitoring report for Strategic Direction SD-6, Safety Leadership.

Summary: Report on the status of Strategic Direction SD-6, Safety Leadership (SD-6), for safety performance from July through December 2023. Report addresses safety leadership accomplishments during the second six months of the year, current Days Away Restricted Time (DART) numbers, and safety opportunities and challenges.

Board Policy: This report supports the SD-6 Core Value of Safety by providing a safety performance status.
(Number & Title)

Benefits: Provide the scheduled bi-annual monitoring report as requested by the Board of Directors and Executive Staff. The report provides an opportunity to make recommendations or policy revisions, as necessary.

Cost/Budgeted: None

Alternatives: Provide the Board monitoring report without a presentation.

Affected Parties: Board of Directors, Executive Staff

Coordination: Organization-wide

Presenter: Ellias van Ekelenburg, Director of Environmental, Safety, and Real Estate Services

Additional Links:

SUBJECT SD-6, Safety Leadership Board Monitoring Report	ITEM NO. (FOR LEGAL USE ONLY) 5
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

OFFICE MEMORANDUM

TO: Board of Directors

DATE: February 28, 2024

FROM: Claire Rogers *CR 2/28/24*

**SUBJECT: Audit Report No. 28007742
Board Monitoring Report; SD-6: Safety Leadership**

Internal Audit Services (IAS) received the SD-6 *Safety Leadership* second-half 2023 Biannual Board Monitoring Report and performed the following:

- Selected a sample of statements and assertions in the report for review.
- Interviewed report contributors and verified the methodology used to prepare the statements in our sample.
- Validated the reasonableness of the statements in our sample based on the data or other support provided to us.

During the review, nothing came to IAS' attention that would suggest the items sampled within the SD Board Monitoring report did not fairly represent the source data available at the time of the review.

CC:

Paul Lau

**Board Monitoring Report 3rd and 4th Quarters,
2023 Strategic Direction SD-6, Safety
Leadership**



1. Background

Strategic Direction SD-6, Safety Leadership states that:

Creating a safe environment for employees and the public is a core value of SMUD.

Through best practice methods and continuous improvement, SMUD will be recognized as a leader in employee safety while also assuring the safety of the public related to SMUD operations and facilities. SMUD commits to a proactive approach, including the active involvement of SMUD leadership, employees, contractors, and the community, as well as comprehensive monitoring of organizational and public safety performance.

Therefore, SMUD will continuously improve safety results related to:

- a) Workplace Safety
 - i) Reduce SMUD’s injury severity incidents to 13 or less than by 2025, as measured by OSHA’s Days Away Restricted Time (DART), a rate that demonstrates top quartile safety performance for similar size utilities using the Bureau of Labor Statistics (BLS) work-related safety data.
 - ii) Provide timely, quality health care for injured employees that aids their recovery while maintaining positive financial performance of the workers’ compensation program.
- b) Contractor Safety
 - i) Support contractors to reduce and eliminate potential hazards for Serious Injuries and/or Fatality (SIF) when conducting high risk work.
- c) Public Safety
 - i) Track and report injuries to the public related to SMUD operations or facilities.
 - ii) Implement measures to protect the public from injuries related to SMUD operations or facilities.

2. Executive Summary

- a) **SMUD is in compliance with the SD-6 direction and is in alignment with SMUD’s new 5-year strategy of working toward a zero-incident culture.**

Workplace Safety

SMUD recorded 42 OSHA Recordables injuries in 2023. Seventeen of the 42 OSHA injuries (10 Lost Time & 7 Modified Duty cases) resulted in a 0.79 DART rate. Ergonomic injuries in the field contributed to 45% of all injuries. Knee, shoulder, and back have been identified as the most common injured body parts for the field

ergonomic injuries. Although SMUD saw an uptick in workplace injuries in 2023, we remain on track to meet the 2025 target (See Appendix A).

Quality care of injured employees is measured through the Workers' Compensation program's performance, which is assessed annually by an independent actuary. SMUD continues to have a reduction in claims over the past three years, a reduction in injury frequency rates, and a reduction in indemnity benefits as presented below.

Actuarial report covers all losses as of June 30, 2023.	2019	2020	2021	2022	2023
No. of Claims (Medical & Indemnity)	85	89	59	54	46
Incident rate per 100 employees	3.6	2.3	2.4	2.2	1.8
Rates per \$100 payroll	.94	.94	.85	.67	.58

This past year continued to present challenges with COVID-19. COVID-19 has not only impacted the way SMUD is getting work done but has also resulted in new and emerging legislation surrounding paid leave and workers' compensation liabilities for COVID related injuries. Despite these challenges SMUD's program remains strong and continues to lead when compared with similarly situated organizations. No COVID-19 claims were made in 2023.

Contractor Safety

SMUD continues to utilize ISN to evaluate safety records and performance for high-risk contractors. This evaluation focuses on Contractor Fatality History, OSHA Citation History, DART, and Total Recordable Incident Rates (TRIR), Insurance Experience Ratio, Safety Culture Questions, and Safety Program Review. Currently SMUD has 110 contractors in the ISN system.

This past year we substantially increased the number of site safety evaluations for high-risk contractors to validate safety performance on the jobsites. Safety completed 454 site safety visits through the 4th Quarter of 2023 and exceeded the 2023 goal of 200 evaluations. These site visits focused on SMUD contractors who work with Power Generation, Environmental Services, Line, Substation, Facilities and Vegetation Management on projects where high-risk work is performed. This work includes high voltage work, working at heights, vegetation management, confined spaces, excavations, etc. Additionally, we have fully integrated the use of the Safety Management System (SMS) for inspections, incident tracking, reporting and investigations of SMUD contractors. This allows SMUD to verify safe working practices by our contractors to reduce the potential for serious injuries or property damage. Contractor reported incidents which required an investigation to be completed, and typically will warrant additional site safety visits to verify corrective measures have been put into place to reduce further occurrences.

In addition, SMUD Procurement and Safety have partnered to enhance contract language as it relates to contractor safety requirements, Request for Proposal (RFP)

templates for high-risk work and incorporating contractor safety as part of the onboarding process.

Public and Community Safety

SMUD tracks public and community incidents in the Safety Incident Tracking System (SITS) involving car-pole, electrical contact, dig-in incidents, and injuries to the public that are related to SMUD's operations or facilities. For the entire year of 2023, there were 253 incidents where the public struck a SMUD asset with a vehicle, with four fatalities from such events. Seventy-two dig-ins have been reported with no injuries. Two electrical contacts with one minor injury. Public safety has partnered with local agencies to expand knowledge of the dig in and electrical safety response programs.

3. Additional Supporting Information

The new SD-6 Safety Direction became effective February 2021. Our goal is to achieve the desired performance objectives by year-end 2025. This report summarizes the first half of the 2023 safety performance.

Safety Leadership. The Safety Team continues with its integration efforts to support Executive Leadership's 5-year plan that emphasizes zero incidents and injuries and a focus on a zero-incident safety culture. SMUD's Chief Executive Officer (CEO) Paul Lau, re-emphasized the need to improve safety at SMUD with a greater focus on improving our "Safety for Life" culture, reducing the risk of serious injuries and fatalities, implementing a safety management system (SMS), and improving the analysis of injury and incident trends. These goals and strategies are outlined in SMUD's Safety Road Map and Enterprise Strategy, which was revised in 2023.

Safety Management System (SMS). During 2023, Safety continued to focus on optimization of Benchmark Gensuite the new Safety Management System (SMS). The Safety team continue to enhance applications within the system to better fit SMUD needs. New processes are being automated and introduced to employees within various applications in SMS. This includes the recording of field tailboards, safety inspections, supervisor employee interactions, EMF meter loans, contractor safety audits and injuries, office, and field ergonomics, and more. Customized dashboards have been created for field tailboards and Supervisor employee interactions.

Safety Standards Development. SMUD's safety team continues to update Health & Safety Standards, as an on-going continuous improvement process, to provide a foundation for the organization's World Class Safety initiatives.

The SMUD's safety team also updated the COVID-19 IIPP Appendix, due to regulatory updates from the California Department of Public Health (CDPH) and Cal/OSHA regulations, which were minimized the COVID-19 requirements. This ensures compliance for our Injury Illness Prevention Program (IIPP) and COVID-19 protocols. Information on the updates is continuing to be provided to all SMUD personnel in various formats, including Safety Meetings, ENN's, on-site electronic monitors, and drop-in meetings.

Supervisor-Employee Interactions. Safety continues to strengthen the quality of the supervisor-employee interaction program by improving inspections and moving the

process to the Safety Management System (SMS). Emphasis is placed on field visits for work with the highest hazard potential. SMUD's safety team continues our efforts in visiting crews throughout SMUD, to assist with employee safety concerns, processes, procedures, and equipment. For office personnel, an emphasis is placed on observing personnel pertaining to ergonomic risk, and slip/trip/fall hazards in walking areas. During 2023, a total of 11,008 Supervisor-Employee interactions were complete that resulted in a 133% percentage observed.

Near Miss Reporting. Leadership continues to support and encourage near miss and positive observation/good catch reporting. The goal of this process is to identify opportunities for learning, to prevent incidents from occurring. During 2023, 180 near miss and positive observation/good catch reports were recorded in the Safety Management System (SMS).

Safely Conducted Observations Reduce Common Hazards (SCORCH). Engagement & Trending Data

Throughout the second half of 2023, a total of 2217 employees were observed under the Office & Professional process. Head/Neck posture was the top safe and at-risk behavior during this time frame. Our Behavior Highlights acknowledge the good job employees showed for keeping head in neutral postures in alignment with ears over shoulders at a high percentage. Risk Reduction Reminders stressed the importance of proper monitor height settings to avoid sustained awkward postures (chin to chest and/or chin to sky) of the head/neck area. The value of micro breaks, frequent stretching, and elevated awareness towards the later part of the day or work week was also part of the conversation.

Under the Electrical Trades and CFAS-Field process, a total of 2202 field employees were observed. Behavior Highlights were related to the high consistency employees showed for protecting their head and feet while performing job tasks. Hard Hat and Footwear tied as the top safe behaviors. Risk Reduction Reminders focused on the at-risk behavior of Situational Awareness. Guidance was provided related to the behavioral benefits of constantly updating information pertaining to surroundings for potential moving and changing hazards to the work area (e.g., stray dogs, agitated people, unlawful activity). Positively promoted how preparing for the unexpected, aids in making informed decisions to successfully address events, should they occur.

SCORCH Safety for Life promotions included the following:

- After attending Dekra's 2023 Safety in Action Conference in April. Committee members held a two-day (In-person/virtual) SCORCH Mini Conference to share best practice. Presentations were provided to all employees highlighting personal ownership and awareness for working safely. Topic shares ranged from Accountability for Yourself & Others, Stuff Happens and Fending off Fatigue. Positive feedback related to the relevancy of topics was received from employees and leadership in attendance.
- Digital Campaigns - Highlighting the ease and efficiency in which observations can be completed via the Safety Management System "7 Minutes for Safety" continued.
- SCORCH successfully expanded its behavior influencing ability through the promotion of two photo contest events. It was a fun way for employees to include family members as well as themselves showing awareness for demonstrating safe behaviors at home and at play. SMUD employees are engaged in a wide variety of activities and hobbies, with the

contest providing opportunities to showcase them combined with the safe behavior statement. This event has become an employee's favorite.

- SCORCH partnered with the Sacramento Power Academy to develop a Fatigue Awareness Training. Employees of all levels will be provided information, resources and guidance designed to elevate awareness of what fatigue is and the potential impacts to working in a fatigued state. Training is scheduled to take place 1st quarter 2024.

4. Challenges

COVID-19. The safety of our employees is of utmost importance, so we continue to monitor SMUD COVID-19 cases and manage prevention efforts. In 2023 SMUD Safety, People, Services, & Strategies, and the Communications updated the COVID-19 guidance to meet regulatory changes within the Cal-OSHA Emergency Temporary Standard for facial coverings, testing programs, quarantine, and isolation guidelines to protect employees, contractors, and the public. SMUD continues to provide employees with COVID-19 antigen testing at our EC-OC Med Services clinic. Our third-party vendor Axiom Medical continues to handle employee contact tracing and this process has been working well. In order to improve our employee experience, the Safety dept. led the roll out of a new mobile app that allows employees to log positives cases and receive guidance at any time. During Q3/Q4 2023, SMUD has received notifications of 151 COVID positive cases from staff. As required both contact tracing and notification of potential exposures have occurred with all personnel impacted.

Work-Related Musculoskeletal Disorders (WMSDs). The SMUD Safety Team continues to partner with business units to reduce all WMSD's. Ergonomic evaluations are conducted in the office, field, and virtually to meet the needs of the workforce. From July through December the Ergonomics Team conducted 186 ergonomic evaluations that were requested through Concern Reporting for a total of 369 for the year. Data collection enhancements to the Ergonomic Evaluator application went live in the 3rd quarter and will provide insight on ergo trends across SMUD. The Ergonomic Initial and Refresher Training for office employees was updated to reflect the new hybrid workforce. In addition, Safety continues to partner with SCORCH to utilize data to reduce potential soft tissue injuries.

Injury Prevention Outpost (IPO) program also known as **Field Ergo** program continues to show improve with field forces. After an initial group training during the monthly safety meetings for the various work groups to share the program details, our ergonomic experts continue to visit job sites and provide the field crew(s) with specific or personal, one-on-one assistance, covering stretching techniques; providing ergo support tools; identifying awkward postures, excessive/forceful exertions, and repetitive motions. This program originally started within Line Division and has been also requested by operational areas.

5. Recommendation

SMUD is committed to becoming a recognized leader in safety. Both SMUD's leadership team and employees recognize that to achieve success we must integrate safety into all that we do. It is recommended that the Board accept the Monitoring Report for SD-6.

6. Appendices - Business Segment Safety Program Improvement Initiatives

Energy Delivery and Operations. The SMUD's safety team started a "World Class Safety" program in 2023, utilizing the Energy Delivery & Operation Strategic Plan's Key Objectives, as the messaging, to "drive a culture of safety in pursuit of zero accidents." Utilizing the 2023 Safety and Reliability tactics, the Safety Team worked with the smaller field-based work groups (i.e., Meter Shop, Veg Management, Telecom, Haz Mat/Network/Substations, and CMI/Survey), and other teams, such as Fleet and Warehouse, to identify foundational Leading Indicators to track progress throughout the year. These included: Monthly Vehicle Inspections (ensuring a vehicle is road-worthy), Supervisor Crew Visits and Safety Team Crew Visits (putting eyes on work and having safety conversations with field crews), SCORCH observations (providing the time and support to field crews for participation and identifying barriers) and ensuring field crew members completed their annual bundled safety training, resulting in the following: 916 Monthly Vehicle Inspections completed; 469 Crew Visits; and 110 Bulk Substation Inspections being completed. In 2024, the safety team will continue to work with business units on the foundational efforts above and continue to build a World Class Safety Program. The original foundational efforts were chosen, as they reflected employee accountability and safe behaviors in which to improve on. In 2024, the safety team added activities focusing on the employee and the Supervisor working together on safety improvements and collaboration. For example, Safety Risk Assessment (SRAs) usage will be added; Supervisor and Safety Crew visits will focus on quality, not just quantity, to identify potential safety hazards, process improvements, and good catches, which will be shared during safety meetings and other communication methods. The safety team will also focus on improvements of the Lock Out/Tag Out (LOTO) Programs for each of the work groups, which requires LOTO. This will include a review of the program, ensure the proper locks are available to the employees, and the programs are being correctly adhered to.

The quarterly World Class Safety meetings with work group leadership, will continue to provide a regular cadence to review our collaborative safety efforts, seek additional opportunities and topics to focus and improve upon, and SMUD to become the leader in World Class Safety.

In continuing our collaboration with the Sacramento Power Academy, the safety team has continued to identify opportunities to improve our internal safety training and ensure continued and consistency quality. Recently, the safety team identified opportunities to include custom videos into training to enhance the end user experience. Technology continues to advance in the training spectrum and utilization of videos will provide the opportunity to include examples from Subject Matter Experts (SME's) performing work safely, in "classroom" or safety meeting presentations as well as enhance the delivery of safety content, throughout the organization.

Joint Labor Management Safety Committees (JLMSC) continue to evolve with an "All field teams' approach" which allows for the sharing of safety and equipment ideas and mitigation controls, programs, and procedures re-development within our organization. In addition, the JLMSC affords SMUD employees to review utility best practices by benchmarking and/or lessons learned.

SMUD's Flame Retardant (FR) Clothing program continues to help our employees stay safe while perform high risk task. SMUD's vendor continues to deliver on a regular basis for the field forces in our EC-OC yard, which reduces our field forces from driving to and from the vendor many store locations. This continues to provide a significant cost savings (time, gas, and driver risk reduction) for SMUD. Our safety efforts helped eliminate hundreds of individual driver trips back and forth. The Field forces feedback and response continues to be positive and appreciative.

Safety for Life. SMUD's Safety and Environmental Day returned this past year after postponing for three years during the COVID-19 pandemic. The event took place at Safety Center in the Safetyville town. The highlighted events we scheduled were pedestrian safety, bicycle safety, a driving simulator as well as a CPR class. There were over 145 attendees which included SMUD employees and their families.

Sparky's Crew continues to get families involved in safety by sending postcards and quarterly newsletters to SMUD families enrolled.

We continue to place emphasis on personal shares in our Safety for Life communications. In 2023, 23 different articles were shared across SMUD. Examples of article topics include: winter driving, heart health, eyes on path, mental health and eye protection. Quarterly Safety for Life meetings have returned to in-person with the option for Teams as well as an online meeting that can be taken at the employees' convenience.

Zero Carbon Energy Solutions (ZCES). Power Generation has continued to prioritize employee safety while ensuring critical work is completed. In addition to Power Generation employees continue with their Daily Dozen morning stretches for soft tissue injury reduction, the safety team is also working with them to revamp their Quarterly Safety Meetings, their Leadership Meetings; and their annual bundled safety training (with the SPA Team).

Currently, our OSHA Voluntary Protection Program (VPP) Site Safety Coordinator continues to work as a liaison between the contractor and the Hydro Operations crews, to ensure the findings are being addressed and completed, as a requirement to maintain the Cal/OSHA VPP status. As a reminder: VPP is designed to recognize employers and their employees who have implemented safety and health programs which effectively prevent and control occupational hazards. These programs go beyond the minimum required Cal/OSHA regulations and provide the best feasible protection at the site. Achieving this status ensures Hydro Operations will continue with safety process improvements as the annual comprehensive safety audits are performed by the third-party contractor.

VPP establishments are considered leaders in the field of workplace safety and health. The management commitment and employee participation are key elements in achieving VPP recognition. Applications within the Safety Management System are being utilized by Hydro Operations to ensure employees have a convenient avenue to participate in safety related activities and to track improvement.

Customer & Community Services (CCS). Safety continues to work closely with Customer & Community Services to maintain safe operations of the CSC lobby. Safety, Facilities, and the lobby leadership team have been collaborating on Ergonomic design improvements of the customer cashier lobby to better accommodate staff to serve our customers. CCS client support continues to be our goal, so we have increased our visibility through in-person meetings, safety walk throughs and discussions with supervisors as more staff come on campus after being fully remote to ensure we are meeting their needs. CCS leadership started entering Supervisor Interactions in SMS under ACE forms. Training was provided on how to navigate the tool and application for better quality interactions through eyes on work engagement and safety communications. CCS entered over 400 interactions since the start of this new process.

Corporate Financial and Administrative Services (CFAS). Facilities continues to support Home-Based Agent workspace installations to ensure ergonomic comfort for employees working at home. Facilities had a major project of demobilizing and demolishing the modulars at the HQ campus. This endeavor caused a mass collaboration of all of facilities as Buildings & Grounds had to move the existing occupants into their new workspace throughout the FRF and HQ. Buildings & Grounds also had to unpack and clean areas throughout the campus that had sat unoccupied to provide a refreshed and cleaned area for the new occupants. Facilities electricians and stationary engineers collaborated in shutting down fire systems, electrical, and plumbing of the modulars to prepare for the removal of the modulars. Safety observed safe lockout tagout procedures performed by electricians and FSEs as disconnections were performed. Facilities carpenters played a role in creating more storage space for the previous occupants of the modulars by building a new storage space in the HQ basement level. Facilities and Safety collaborated in holding the first Facilities Hands-On Training Hoedown which included a total of 3 stations focused on hands-on fire extinguisher training, a fall protection demonstration in partnership with one of our vendors, and a hands-on confined space rescue training. Facilities continues to support the SMUD 2030 Zero Carbon goal of supporting EV Charging infrastructure throughout SMUD campuses as a united effort with SMUD contractors.

Warehouse and Safety collaborated in rolling out electronic monthly vehicle inspections on SMS for warehouse assigned vehicles. In addition to vehicle inspections, housekeeping inspections have been added and implemented on the Inspection Tool app on SMS. For 2023, Warehouse completed 100% of their bundled training for warehouse employees. Warehouse also completed development of their standard operating procedures. Safety and Warehouse continue to collaborate on purchasing personal protective equipment and tools for all field forces while building relationships with our local vendors in discussing the latest technology in PPE and various tools.

Warehouse, Fleet, and Safety continue to collaborate in encouraging an increase in employee engagement during monthly safety meetings. Warehouse and Fleet continue to implement employee Safety for Life presentations in which employees receive the opportunity to present a personal safety share relevant to their personal lives both at work or outside of work. Warehouse, Fleet, and Safety also continue to collaborate on implementing the Injury Prevention Outpost (IPO) program with our designated vendor, ROC Physical Therapy to address employee ergonomic concerns and prevent possible

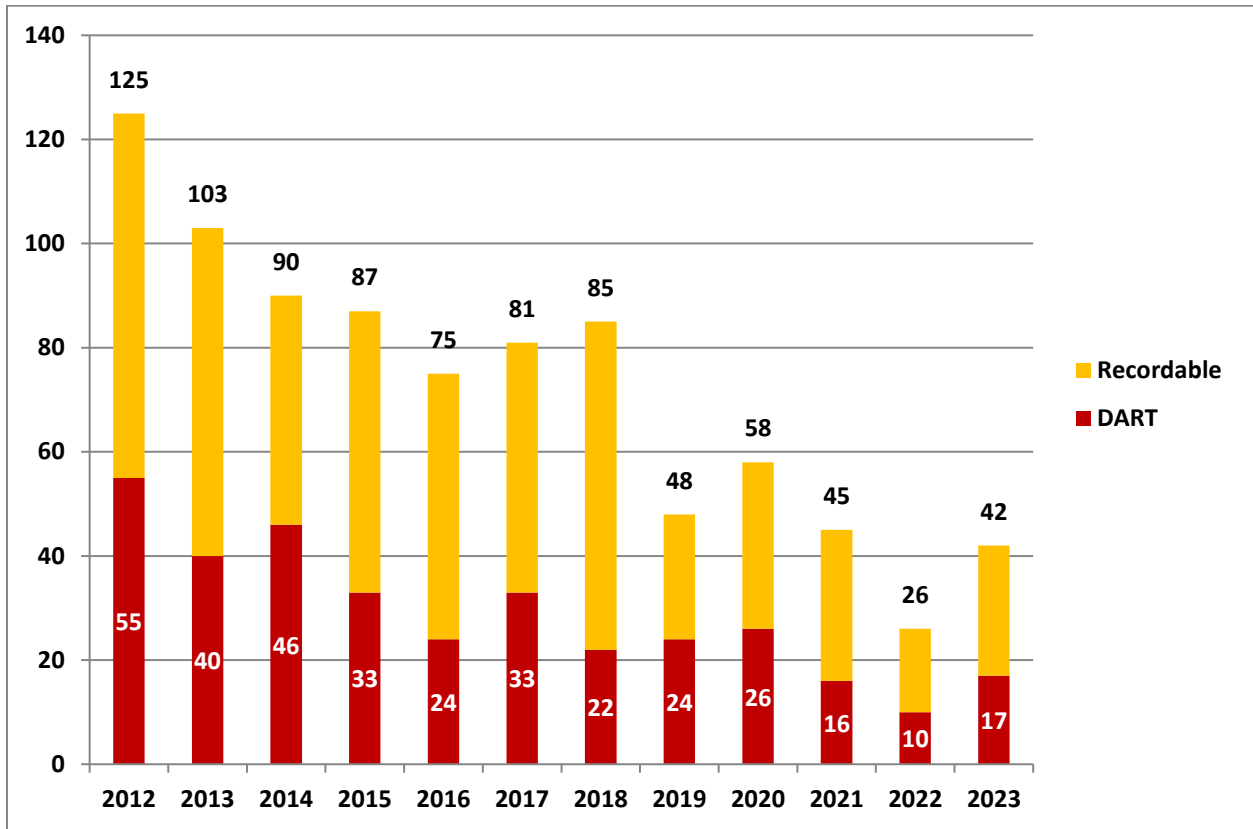
ergonomic injuries. Fleet switched to Geotab as their new fleet tracking system. To improve safe driving awareness, Fleet developed a dashboard to share metrics of assigned fleet vehicles with various business units. Fleet began electronic monthly vehicle inspections on SMS for fleet-assigned vehicles. Fleet also rolled out electronic housekeeping inspections on Inspection Tool on SMS. Fleet completed 100% of their bundled training in October. Fleet employees continue to participate in EV training courses customized to suit SMUD's needs in preparation for the transition to an all-electrified fleet by 2030.

All business units continue to partner in a consultative collaborative development of a World Class Safety program as OneSMUD with quarterly meetings addressing leading and lagging indicators and the latest safety observation trends across the enterprise.

Driver Safety. Supervisors are conducting side-by-side ride alongs to provide coaching and safe driving skills guidance. While Safety was able to provide additional in-person classroom and behind the wheel Smith System training. Driving Rodeos continue to be in high demand and the new partnership with Safety Center turned out to be a big success. In 2023 Safety hosted Driving Rodeo events for Substation, Network, Elec. Techs., and Revenue Operations. Safety has increased the sharing of driving-safety related topics at ED&O Safety meetings this year and is working on new safe-driving messaging materials for the ECOC Yard, HQ and Fresh Pond parking areas, as well as for digital displays at each location. Additionally, a refresh of the safe driving decals on Fleet vehicles is under way. Safe driving is being emphasized in vehicle reports that are provided to directors and managers who have frequent drivers. The reports are focused on speeding as well as seatbelt violations with the potential of more driving details to be added. Driving Rodeo planning for Line Division is currently underway for 2024.

Appendix A

DART Count and OSHA Recordable 2012-2023



RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board accepts the monitoring report for **Strategic Direction SD-6, Safety Leadership**, substantially in the form set forth in **Attachment ____** hereto and made a part hereof.

SSS No.
ZCS-24-006

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date Finance & Audit – 03/19/24
Board Meeting Date March 21, 2024

TO				TO			
1.	James Frasher	6.	Lora Anguay				
2.	Brandy Bolden	7.	Jose Bodipo-Memba				
3.	Farres Everly	8.					
4.	Frankie McDermott	9.	Legal				
5.	Scott Martin	10.	CEO & General Manager				
Consent Calendar	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <i>If no, schedule a dry run presentation.</i>	Budgeted	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <i>(If no, explain in Cost/Budgeted section.)</i>		
FROM (IPR) Tom Moore	DEPARTMENT Grants and New Business Development		MAIL STOP K221	EXT. 5064	DATE SENT 3/4/24		

NARRATIVE:

Requested Action: Authorize submission of a SMUD Clean PowerCity Pathways project grant application for a Department of Energy (DOE) Grid Resilience and Innovation Partnerships (GRIP) grant, Topic Area 1 and authorize the CEO and GM, or his delegate, to negotiate and execute in the name of Sacramento Municipal Utility District a GRIP grant recipient contract with DOE as well as all other grant documents, including but not limited to, agreements, amendments, and requests for payment, necessary to facilitate grant participation.

Summary: SMUD wishes to seek funding from the DOE GRIP grant for its proposed Clean PowerCity Pathways. This project plans to develop a modern power substation (El Rio), integrating a decarbonized grid and providing community resilience. The grant application is due April 17, 2024, and seeks \$100 million of funds, and SMUD’s cost-share is \$100 million. If awarded, the grant funds will help SMUD rebuild its existing Elverta bulk substation in North Sacramento automating electricity flow, connecting intelligent grid infrastructure, and enabling renewable energy and energy storage integration optionality.

The new El Rio substation will deploy robust security, redundant systems, backup power sources, and improved fault detection mechanisms, enhancing grid resilience. SMUD will work with Native American Tribes at utility project sites, and as well as with CSUS, UC Davis and Los Rios Community Colleges. The grant will also support electrification and weatherization of homes in disadvantaged neighborhoods using resident trainees and connect skilled trades and college students with job shadowing, internships, and a new engineering curriculum on modern substations based on El Rio.

Board Policy: *(Number & Title)* Strategic Direction SD-4, Reliability; Strategic Direction SD-7, Environmental Leadership; Strategic Direction SD-9, Resource Planning; Strategic Direction SD-10, Innovation.

Benefits: The Clean PowerCity Pathways is designed to identify and implement the base elements and critical infrastructure needed to prepare and implement a complete substation rebuild, electrify 500 homes, and develop and connect DERs to the grid. The proposed Project will fund the construction of the Elverta substation expansion, deployment of battery energy storage systems, and all neighborhood home electrification components.

Cost/Budgeted: The Project has been planned and budgeted. The grant funding request is \$100 million with a \$100M SMUD cost-share requirement, which will be used to offset the costs of the Project.

Alternatives: Do not approve CEO/GM delegation to proceed with grant application.

Affected Parties: All SMUD Departments; CSUS, UC Davis, Los Rios Community College District, Local Tribes.

Coordination: Board Office, Executive Office, Grants and New Business Development, Substation Engineering, Transmission Planning Operations, Accounting and Legal

Presenter: James Frasher, Manager, New Business Development/Research & Development

Additional Links:

SUBJECT DOE GRIP Topic Area 1 Grant Application	ITEM NO. (FOR LEGAL USE ONLY) 6
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

RESOLUTION NO. _____

WHEREAS, in support of SMUD's **2030 Zero Carbon Plan**, SMUD plans to submit a grant application for its **Clean PowerCity Pathways** project to the **Department of Energy (DOE)** for the **Grid Resilience and Innovation Partnerships (GRIP) Topic Area 1 (TA1) Grant (Grant)** due on April 17, 2024; and

WHEREAS, in support of the grant project, SMUD's cost share is \$100 million; and

WHEREAS, the project plans to develop a modern power substation (El Rio Substation), integrating a decarbonized grid and providing community resilience; and

WHEREAS, the **Grant** provides funding that, if awarded, SMUD would use to rebuild its existing Elverta bulk substation in North Sacramento, automating electricity flow, connecting intelligent grid infrastructure, and enabling renewable energy and energy storage integration optionality; and

WHEREAS, the new El Rio Substation will deploy robust security, backup power sources, and improved fault detection mechanisms, enhancing grid resilience; and

WHEREAS, SMUD will work with Native American Tribes at utility project sites, as well as **California State University, Sacramento (CSUS)**, **University of California, Davis (UC Davis)**, and **Los Rios Community Colleges**; and

WHEREAS, the potential funds acquired from the **Grant** will also support electrification and weatherization of homes in disadvantaged neighborhoods using resident trainees and connect skilled trades and college students with job shadowing,

internships, and a new engineering curriculum on modern substations based on El Rio Substation; **NOW, THEREFORE,**

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. This Board authorizes the submittal of SMUD's **Clean PowerCity Pathways** project application to the **Department of Energy (DOE)** for the **Grid Resilience and Innovation Partnerships (GRIP) Topic Area 1 (TA1) Grant (Grant)**.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to negotiate and execute in the name of Sacramento Municipal Utility District a **DOE GRIP Grant** recipient contract as well as all **Grant** documents, including, but not limited to, applications, agreements, amendments and requests for payment, necessary to facilitate **Grant** participation.

SSS No. ZCS 24-007

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date Finance & Audit – 03/19/24
Board Meeting Date March 21, 2024

TO	TO
1. James Frasher	6. Lora Anguay
2. Brandy Bolden	7. Jose Bodipo-Memba
3. Farres Everly	8.
4. Frankie McDermott	9. Legal
5. Scott Martin	10. CEO & General Manager

Consent Calendar	x	Yes		No <i>If no, schedule a dry run presentation.</i>	Budgeted	x	Yes		No <i>(If no, explain in Cost/Budgeted section.)</i>
FROM (IPR) Tom Moore				DEPARTMENT Grants & New Business Development	MAIL STOP K221			EXT. 5064	DATE SENT 3/1/24

NARRATIVE:

Requested Action: Authorize submission of a SMUD ReImagining Thermal Resources Operations: Fleet in Transition (RETROFIT) project application to the Department of Energy (DOE) for the Grid Resilience and Innovation Partnerships (GRIP) grant, Topic Area 3 and authorize the CEO and GM, or his delegate, to negotiate and execute in the name of Sacramento Municipal Utility District a GRIP grant recipient contract with DOE as well as all other grant documents, including but not limited to, agreements, amendments, and requests for payment, necessary to facilitate grant participation.

Summary: SMUD wishes to seek funding from the DOE GRIP grant for its RETROFIT project. The grant application is due April 17, 2024, and seeks \$250 million of funding, and SMUD’s cost-share is expected to be \$414 million. The grant funds will help SMUD implement RETROFIT which will consist of upgrades across the grid ecosystem that include diverse generation, transmission, and distribution solutions at multiple locations and span an array of innovative approaches to improve grid resiliency, flexibility, and reliability. The RETROFIT project will also decrease energy burdens and costs by providing financial incentives and support for battery storage and electrification measures in low-income communities. This holistic approach will significantly advance SMUD’s goal of decarbonizing its energy supply by 2030 and provide a replicable path for other utilities to follow in developing additional projects.

Board Policy: *(Number & Title)* Strategic Direction SD-4, Reliability; Strategic Direction SD-7, Environmental Leadership; Strategic Direction SD-9, Resource Planning; Strategic Direction SD-10, Innovation.

Benefits: RETROFIT will deploy innovative technologies and utilize novel approaches to improving generation, distribution, and transmission infrastructure across various locations within SMUD’s service area. RETROFIT’s successful deployment will deliver significant advancements in grid resiliency, reliability, and decarbonization. SMUD expects the Project to transform its energy infrastructure by incorporating cutting-edge, hydrogen-ready technologies and large-scale battery storage.

Cost/Budgeted: The Project has been planned and budgeted. The grant funding request is \$250 million with a \$414 million SMUD cost-share requirement, which will be used to offset the costs of the Project.

Alternatives: Do not proceed with grant application and potentially receive grant funding.

Affected Parties: All SMUD Departments, Los Rios Community College District.

Coordination: Grants and New Business Development and Legal

Presenter: James Frasher, Manager, New Business Development/Research & Development

Additional Links:

SUBJECT DOE GRIP Topic Area 3 Application	ITEM NO. <i>(FOR LEGAL USE ONLY)</i> <b style="font-size: 1.5em; color: blue;">7
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RESOLUTION NO. _____

WHEREAS, in support of SMUD’s **2030 Zero Carbon Plan**, SMUD plans to submit a grant application for its **Relmaging Thermal Operations Fleet in Transition (RETROFIT)** project to the **Department of Energy (DOE)** for the **Grid Resilience and Innovation Partnerships (GRIP) Topic Area 3 (TA3) Grant (Grant)** due on April 17, 2024; and

WHEREAS, the grant application will seek \$250 million in funding with SMUD’s cost share expected to be \$414 million; and

WHEREAS, the **Grant** funds, if awarded, will help SMUD implement **RETROFIT**, which will consist of upgrades across the grid ecosystem that include diverse generation, transmission, and distribution solutions at multiple locations and span an array of innovative approaches to improve grid resiliency, flexibility, and reliability; and

WHEREAS, the **RETROFIT** project will also decrease energy burdens and costs by providing financial incentives and support for battery storage and electrification measures in low-income communities; and

WHEREAS, the holistic approach will significantly advance SMUD’s goal of decarbonizing its energy supply by 2030 and provide a replicable path for other utilities to follow in developing additional projects; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. This Board authorizes the submittal of SMUD’s **Relmaging Thermal Operations Fleet in Transition (RETROFIT)** project application

to the **Department of Energy (DOE)** for the **Grid Resilience and Innovation Partnerships (GRIP) Topic Area 3 (TA3) Grant (Grant)**.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to negotiate and execute in the name of Sacramento Municipal Utility District a **DOE GRIP Grant** recipient contract as well as all **Grant** documents, including, but not limited to, applications, agreements, amendments and requests for payment, necessary to facilitate **Grant** participation.

SSS No. ZCS 24-005

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date Finance & Audit – 03/19/24
Board Meeting Date March 21, 2024

TO	TO
1. James Frasher	6. Lora Anguay
2. Brandy Bolden	7. Jose Bodipo-Memba
3. Farres Everly	8.
4. Frankie McDermott	9. Legal
5. Scott Martin	10. CEO & General Manager

Consent Calendar	X	Yes	No <i>If no, schedule a dry run presentation.</i>	Budgeted	Yes	x	No <i>(If no, explain in Cost/Budgeted section.)</i>
FROM (IPR)	DEPARTMENT			MAIL STOP	EXT.	DATE SENT	
Tom Moore	Grants and New Business Development			K221	5064	03/01/24	

NARRATIVE:

Requested Action: Approve proposed revisions to Board-Staff Linkage BL-13, Delegation to the CEO with Respect to Grants.

Summary: Staff recommends revisions to Board Staff Linkage BL-13 to provide greater flexibility to submit grant applications and executed grant-related contracts. As a result of recent funding legislation, there continues to be a variety of federal and state grant opportunities available for SMUD which require applications and grant contracts. Recommendations include removal of the \$3 million grant application and contract limit based on SMUD’s commitment of financial and in-kind resources. This is replaced with authority for SMUD staff to proceed with grant applications and contracts if they are consistent with other BL policies, or the project is otherwise brought to the Board for approval as a budgeted project. Certain grants provide financial assistance for a project that has already been approved as a budgeted item. If SMUD has authorized a project in which a grant would support implementation of that project, by enhancing the original project scope, or contributing funding or partner support towards the project, staff is delegated authority to select and enter into contracts with grant partners and file grant applications. Additionally, the revisions include a requirement that the CEO and GM provide advance notice to the Board of grant commitments that create material financial, reputational, or operational risk. Copies of the proposed revisions are attached in redline and “clean” format.

Board Policy: *(Number & Title)* Strategic Direction SD-2, Competitive Rates; Strategic Direction SD-7, Environmental Leadership; Strategic Direction SD-10, Innovation; Strategic Direction SD-13, Economic Development; Strategic Direction SD-19, Diversified Business

Benefits: Updates delegation to provide greater flexibility to apply and contract for grants and includes a Board notice requirement for grants with a material risk.

Cost/Budgeted: No costs are associated with this action.

Alternatives: Make no revisions to the BL-13 or bring forth an alternative option.

Affected Parties: All SMUD Departments.

Coordination: Board Office, Executive Office, Grants and New Business Development, and Legal

Presenter: James Frasher, Manager, New Business Development/Research & Development

Additional Links:

SUBJECT Proposed Revisions to BL-13, Delegation to the CEO/GM with Respect to Grants	ITEM NO. (FOR LEGAL USE ONLY) 8
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

SMUD BOARD POLICY



Category: Board-Staff Linkage
Policy No.: BL-13
Title: Delegation to the CEO with Respect to Grants

SMUD's participation in state and federal grants as a prime-recipient or sub-recipient provides a unique opportunity for SMUD to leverage state and federal funds to advance SMUD's policies, conduct research and development projects, and provide benefits to the Sacramento community. SMUD's grant participation shall further SMUD's strategic directives, provide benefits to SMUD's customers and the community, and shall be consistent with the following principles.

- a) **Competitive Advantage:** Because grants are typically competitively awarded, SMUD will select its grant partners or participate on a grant team where the partners provide a competitive advantage in the grant selection process. Time permitting and where practical, SMUD will select qualified grant partners through a formal or informal request for qualifications.
- b) **Viable Grant Partners:** SMUD shall only contract with reputable and financially viable grant partners.
- c) **Local Grant Partners:** All other things being equal, in selecting grant partners SMUD will generally prefer governmental entities, not-for profit organizations, and businesses located in the Sacramento region.
- d) **Delegation of Authority to the CEO:** The Chief Executive Officer and General Manager (CEO) is delegated authority to select and enter into contracts with grant partners and file grant applications where SMUD's commitment of financial and in-kind resources ~~to the grant does not exceed \$3 million~~ is consistent with delegations under other Board-Staff Linkage policies, or is otherwise brought to the Board for approval as a budgeted project.
- d)e) **Reporting:** The CEO shall provide advance notice to the Board of grant commitments that create material financial, reputational, or operational risk.

Monitoring Method: CEO Report

Frequency: Annual

Versioning:

November 18, 2010	Resolution No. 10-11-10	Date of Adoption.
August 4, 2011	Resolution No. 11-08-04	Date of Revision.
August 21, 2014	Resolution No. 14-08-03	Date of Revision.
November 19, 2020	Resolution No. 20-11-02	Date of Revision.
September 21, 2023	Resolution No. 23-09-02	Date of Revision. [Current Policy]
<u>March 21, 2024</u>	<u>Resolution No. 24-03-##</u>	<u>Date of Revision. [Current Policy]</u>

SMUD BOARD POLICY



Category: Board-Staff Linkage
Policy No.: BL-13
Title: Delegation to the CEO with Respect to Grants

SMUD's participation in state and federal grants as a prime-recipient or sub-recipient provides a unique opportunity for SMUD to leverage state and federal funds to advance SMUD's policies, conduct research and development projects, and provide benefits to the Sacramento community. SMUD's grant participation shall further SMUD's strategic directives, provide benefits to SMUD's customers and the community, and shall be consistent with the following principles.

- a) **Competitive Advantage:** Because grants are typically competitively awarded, SMUD will select its grant partners or participate on a grant team where the partners provide a competitive advantage in the grant selection process. Time permitting and where practical, SMUD will select qualified grant partners through a formal or informal request for qualifications.
- b) **Viable Grant Partners:** SMUD shall only contract with reputable and financially viable grant partners.
- c) **Local Grant Partners:** All other things being equal, in selecting grant partners SMUD will generally prefer governmental entities, not-for profit organizations, and businesses located in the Sacramento region.
- d) **Delegation of Authority to the CEO:** The Chief Executive Officer and General Manager (CEO) is delegated authority to select and enter into contracts with grant partners and file grant applications where SMUD's commitment of financial and in-kind resources is consistent with delegations under other Board-Staff Linkage policies, or is otherwise brought to the Board for approval as a budgeted project.
- e) **Reporting:** The CEO shall provide advance notice to the Board of grant commitments that create material financial, reputational, or operational risk.

Monitoring Method: CEO Report

Frequency: Annual

Versioning:

November 18, 2010	Resolution No. 10-11-10	Date of Adoption.
August 4, 2011	Resolution No. 11-08-04	Date of Revision.
August 21, 2014	Resolution No. 14-08-03	Date of Revision.
November 19, 2020	Resolution No. 20-11-02	Date of Revision.
September 21, 2023	Resolution No. 23-09-02	Date of Revision.
March 21, 2024	Resolution No. 24-03-##	Date of Revision. [Current Policy]

DRAFT

RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board approves the revisions to the **Board-Staff Linkage BL-13, Delegation to the CEO with Respect to Grants** substantially in the form as set forth in **Attachment ___**.

SSS No. TR24-004

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date ERCS March 20, 2024
Board Meeting Date March 21, 2024

TO				TO							
1.	Russell Mills	6.	Suresh Kotha								
2.	Scott Martin	7.									
3.	Brandy Bolden	8.									
4.	Frankie McDermott	9.	Legal								
5.	Lora Anguay	10.	CEO & General Manager								
Consent Calendar		Yes	<input checked="" type="checkbox"/>	No <i>If no, schedule a dry run presentation.</i>		Budgeted	<input checked="" type="checkbox"/>	Yes	No <i>(If no, explain in Cost/Budgeted section.)</i>		
FROM (IPR) Alex Fastovich				DEPARTMENT Treasury				MAIL STOP B355	EXT. 6509	DATE SENT 3/5/24	

NARRATIVE:

Requested Action: Approve the issuance of SMUD 2024 Series M Revenue Bonds and/or SMUD 2024 Series N Revenue Refunding Bonds, authorize the distribution of the Preliminary Official Statement, and authorize the Chief Executive Officer and General Manager, or his designee to execute documents necessary to complete the refunding transaction or transactions, including the Bond Purchase Agreement or Agreements.

Summary: SMUD has an opportunity to refund approximately \$200 million of the 2009 Series V and \$250 million of the 2010 Series W bonds. This is anticipated to yield net present value savings of approximately \$20+ million and effectively de-risk our portfolio from government rebate uncertainties. In 2009 and 2010, SMUD issued taxable bonds, receiving semi-annual federal credits to offset higher taxable interest rates. Since 2013, the federal subsidy rebate has been impacted by sequestration, resulting in a cumulative cost to SMUD of over \$6 million to date. Moreover, the federal rebate is subject to periodic renewals, elevating political risk concerning potential future sequestrations. SMUD has the opportunity to refund both taxable bond issuances, lock in saving and remove political/federal subsidy sequestration risk.

SMUD can also refund approximately \$150 million of outstanding commercial paper notes in addition to issuing some new money to fund SMUD’s capital program. This transaction will refund variable rate debt with fixed rate debt, locking in debt service at current rates to reduce interest rate risk, and make the commercial paper capacity available for future capital spending and liquidity purposes.

Board Policy: SD-2 Competitive Rates; SD-3 Access to Credit Markets
(Number & Title)

Benefits: Locks in low interest rates, reduces interest rate risk and eliminates federal subsidy sequestration risk, and additionally, preserves borrowing capacity for future capital spending and liquidity needs. Estimated net present value savings of \$20+ million.

Cost/Budgeted: Transaction expenses are expected to be roughly \$2 million, portion of which were included in the 2024 Budget. Debt service on the refunded bonds was included in the 2024 budget, and savings going forward will be included in any future budgets and provide for headroom for other spending.

Alternatives: Forgo opportunity to capture savings.

Affected Parties: Treasury

Coordination: Treasury

Presenter: Russell Mills, Director, Treasury Operations & Commodity Risk Management, and Treasurer

Additional Links:



March 6, 2024

Memorandum

To: Sacramento Municipal Utility District

Russell Mills
Director Risk Management and Treasurer

Jon Anderson
Assistant Treasurer, Manager Commodity Risk Management

Alex Fastovitch
Principal Financial Analyst

From: PFM Financial Advisors LLC
Chris Lover, Managing Director

Subject: Electric Revenue Bonds, 2024 Series M and Series N
Government Code Section 5852.1
Good Faith Estimate of Cost for the Bond Transaction

General Background Information

The Sacramento Municipal Utility District (“SMUD”) intends to execute a bond transaction in the Spring of 2024, subject to market conditions. There are two series of bonds associated with this transaction:

1. Electric Revenue Bonds, 2024 Series M. The purpose of this transaction is to fix-out \$150 million of currently outstanding commercial paper to free up credit capacity. Additionally, SMUD plans to issue \$100 million in further new money needs. The senior manager for this transaction is J.P Morgan.
2. Electric Revenue Refunding Bonds, 2024 Series N. The purpose of this transaction is to refund two existing series of SMUD’s bonds, the 2009 Series V and the 2010 Series W. Both of these series of bonds have been designated as Build America Bonds. Due to recent litigation, SMUD intends to utilize the Extraordinary Optional Redemption provision and call the bonds for both debt service savings as well as to eliminate further risk that the Build America Bond subsidy will be reduced through future Congressional action. The senior manager for this transaction is Bank of America.

Based on market conditions in the end of February, PFM believes the following information (see Attachment A) is a Good Faith Estimate of Cost of the Bond Transaction as required by Government Code Section 5852.1.



Electric Revenue Bonds, Series 2024 M

Electric Revenue Bonds, 2024 Series M	
True Interest Cost	4.44%
Cost of Issuance and Underwriter's Discount	773,337.25
Bond Proceeds	250,777,501.75
Total Expected Payment Amount	529,947,165.28

The following assumptions were used to determine this Good Faith Estimate:

- Market conditions as of February 29, 2024.
- Assumes back-loaded structure with 2 term bonds and associated sinking funds.
- 5% coupon structure for 2024 Series M Bonds
- 2024 Series M Bonds callable in May 15, 2034
- See Attachment A for further details

Electric Revenue Refunding Bonds, Series 2024 N

Electric Revenue Refunding Bonds, 2024 Series N	
True Interest Cost	2.77%
Cost of Issuance and Underwriter's Discount	1,328,980.86
Bond Proceeds	531,268,270.40
Total Expected Payment Amount	661,383,186.11
Refunded Debt Service, 2009V and 2010W	727,888,186.80

The following assumptions were used to determine this Good Faith Estimate:

- Market conditions as of February 29, 2024.
- Assumes make whole call calculation of the refunded bonds is based on the 10 year Treasury rate.
- 5% coupon structure for 2024 Series N Bonds
- 2024 Series N Bonds callable in May 15, 2034
- See Attachment A for further details

**DRAFT SIXTY-SEVENTH SUPPLEMENTAL RESOLUTION
AUTHORIZING THE ISSUANCE OF ONE OR MORE SERIES
OR SUBSERIES OF ELECTRIC REVENUE BONDS**

SACRAMENTO MUNICIPAL UTILITY DISTRICT

RESOLUTION NO. _____

SIXTY-SEVENTH SUPPLEMENTAL RESOLUTION
AUTHORIZING THE ISSUANCE OF ONE OR MORE SERIES OR SUBSERIES OF
ELECTRIC REVENUE BONDS

(Supplemental To Resolution No. 6649
Adopted January 7, 1971)

Adopted: March 21, 2024

TABLE OF CONTENTS

Page

**ARTICLE CXLVI
2024 BONDS**

Section 146.01	Authorization and Terms of 2024 Bonds.....	2
Section 146.02	Redemption of 2024 Bonds	4
Section 146.03	Deposits to Interest Fund and Principal Account	4
Section 146.04	2024 Sinking Fund.....	5
Section 146.05	Form of 2024 Bonds	5
Section 146.06	Issuance of 2024 Bonds.	6
Section 146.07	Refunding of 2024 Bonds	6
Section 146.08	Use of Depository	6
Section 146.09	Tax Covenants.	8
Section 146.10	Terms of 2024 Bonds Subject to the Master Resolution.	9
Section 146.11	Continuing Disclosure	9

**ARTICLE CXLVII
INSURANCE PROVISIONS**

Section 147.01	Insurance Agreements.....	9
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**ARTICLE CXLVIII
AMENDMENT OF MASTER RESOLUTION**

Section 148.01	Amendment of Master Resolution.....	10
APPENDIX A	FORM OF BOND	A-1
APPENDIX B	FORM OF PROPOSED AMENDMENTS TO MASTER RESOLUTION	B-1

RESOLUTION NO. _____

**Sixty-Seventh Supplemental Resolution
(Supplemental To Resolution No. 6649,
Adopted January 7, 1971)**

**Authorizing the Issuance of One or More Series or Subseries of
Electric Revenue Bonds**

WHEREAS, on January 7, 1971, the Board of Directors of the Sacramento Municipal Utility District (the “Board”) adopted its Resolution No. 6649 providing for the issuance of the Sacramento Municipal Utility District’s Electric Revenue Bonds (as supplemented and amended, herein called the “Master Resolution”);

WHEREAS, the Master Resolution provides that the Sacramento Municipal Utility District (the “District”) may issue bonds from time to time as the issuance thereof is authorized by the Board by a supplemental resolution;

WHEREAS, revenue bonds may be issued pursuant to the provisions of the Master Resolution and Article 6a of Chapter 6 of the Municipal Utility District Act (California Public Utilities Code Sections 12850 et seq.) and the Revenue Bond Law of 1941 (California Government Code Section 54300 et seq.) for the purpose of financing improvements and additions to the District’s Electric System;

WHEREAS, revenue bonds may be issued pursuant to the provisions of the Master Resolution and California Government Code Section 53580 et seq. for the purpose of refunding revenue bonds, including the District’s commercial paper notes (the “Notes”);

WHEREAS, the District has determined to issue its 2024 Bonds (as defined herein), at one or more times and in one or more series or subseries (as specified in the hereinafter defined Sales Certificates) and in an aggregate principal amount not to exceed the principal amount described herein, to (i) to the extent specified in one or more of the Sales Certificates, refund certain series and maturities of the District’s Electric Revenue Bonds (to be identified in one or more of the Sales Certificates) (the “Refunded Bonds”), (ii) to the extent specified in one or more of the Sales Certificates, finance and refinance improvements and additions to the District’s Electric System, including through the payment of all or a portion of the District’s outstanding Notes, (iii) pay costs of issuance (to the extent specified in the Sales Certificates), and (iv) make deposits to the Reserve Fund or a separate debt service reserve fund (as and if specified in one or more of the Sales Certificates);

WHEREAS, the District anticipates that, if necessary or desirable in the judgment of the Treasurer, it may seek commitments from one or more bond insurers (each, a “Bond Insurer”) to issue one or more financial guaranty policies with respect to all or part of the 2024 Bonds, each of which commitments is expected to be conditioned on certain terms and conditions to be set forth in one or more insurance agreements among the applicable Bond Insurer, the Trustee and the District (each, an “Insurance Agreement”);

WHEREAS, Section 8.03 of the Master Resolution provides that the District may amend the Master Resolution by a supplemental resolution to be effective when there shall have been filed with the District or the Trustee the written consents of the holders and registered owners of 60% of the District's Electric Revenue Bonds then outstanding; and

WHEREAS, the District has drafted proposed amendments to the Master Resolution which are described in Section 148.01 of this Sixty-Seventh Supplemental Resolution, and the District intends to issue the 2024 Bonds with the provision that each holder of the 2024 Bonds by purchasing the 2024 Bonds is deemed to have consented to the proposed amendments, all as more fully described herein;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Sacramento Municipal Utility District, as follows:

ARTICLE CXLVI

2024 BONDS

Section 146.01 Authorization and Terms of 2024 Bonds.

(a) The Board hereby authorizes the issuance of revenue bonds of the District for the purpose of (i) refunding outstanding revenue bonds of the District, and/or (ii) financing and refinancing improvements and additions to the District's Electric System, including through the payment of all or a portion of the District's outstanding Notes, in each case in accordance with the Master Resolution and the Sales Certificates. The authorization provided in this paragraph to issue revenue bonds shall include, in addition to the purposes mentioned above, the authorization to issue such bonds for the allocable portion of any original issue discount, underwriting discount, bond insurance premiums, costs of issuance, deposits to the Reserve Fund or a separate debt service reserve fund, and other miscellaneous costs necessary or desirable, in the judgment of the Treasurer, to be financed by such bonds.

(b) One or more series of bonds to be issued under the Master Resolution are hereby created. Said bonds shall be known as the "Sacramento Municipal Utility District Electric Revenue Bonds, 2024 Series []", with such letter or other identifying series or subseries designations as are specified in the Sales Certificates (herein collectively called the "2024 Bonds"). The 2024 Bonds may be sold and issued at one or more times and in one or more series or subseries (as specified in the hereinafter defined Sales Certificates) only in fully registered form. The 2024 Bonds shall be initially registered in the name of "Cede & Co.," as nominee of The Depository Trust Company ("DTC") and shall be numbered in consecutive order in such manner as is determined by the Trustee. Registered ownership of the 2024 Bonds, or any portion thereof, may not thereafter be transferred except as set forth in Section 146.08.

(c) The 2024 Bonds shall be issued in such aggregate principal amount (not to exceed \$800,000,000), shall be dated, shall bear interest at such rate or rates (payable on such dates), not exceeding the maximum rate permitted by law, shall mature and become payable as to principal on such maturity dates in the amounts and subject to such mandatory sinking fund payments on such mandatory sinking fund payment dates, if any, all as set forth in one or more

Sales Certificates to be executed and delivered concurrently with the sale of the applicable series or subseries of 2024 Bonds (collectively, the “Sales Certificates”). If all or any portion of the 2024 Bonds are to bear interest at variable rates of interest, not exceeding the maximum rate permitted by law, the manner of determining such variable rates of interest shall be as set forth in the applicable Sales Certificate. In addition to the provisions required pursuant to the terms of this Resolution to be specified in the Sales Certificates, the Chief Executive Officer and General Manager of the District, any Member of the Executive Committee of the District, the Treasurer of the District, the Secretary of the District, or the Chief Financial Officer of the District or the designee of any of them (each an “Authorized Officer”), on behalf of the District, may set forth in the Sales Certificates such provisions, in a form approved by its bond counsel and the District’s counsel, as such Authorized Officer may deem necessary or desirable and consistent with the purpose of this Resolution, including provisions (i) adding additional covenants and agreements to be observed by the District, (ii) curing, correcting, amending or supplementing any ambiguous, defective or ineffective provision contained in the Resolution, or (iii) amending or supplementing any provision contained herein to the extent necessary to obtain one or more bond insurance policies, to obtain a rating on any of the 2024 Bonds, or to provide for the issuance of any of the 2024 Bonds if, in the judgment of any Authorized Officer, after consulting with its municipal advisor, bond counsel and District counsel, such insurance, rating or provision is reasonable. Any Authorized Officer, acting alone, is hereby authorized and instructed to execute and deliver the Sales Certificates and, upon execution and delivery thereof, the Sales Certificates shall be incorporated herein and in the Master Resolution by reference. The execution and delivery of the Sales Certificates shall be conclusive evidence that, where any judgment or determination of reasonableness is required to be made by the person signing said Sales Certificates, such judgment or determination has been made.

(d) Notwithstanding the foregoing, no Sales Certificate shall specify (i) a true interest cost on the applicable 2024 Bonds bearing interest at fixed rates of interest in excess of 5.50%; or (ii) a maturity date for any 2024 Bond later than forty (40) years after the dated date of such 2024 Bond.

(e) Interest on the 2024 Bonds shall be calculated on the basis and be payable on the dates set forth in the Sales Certificates, to the registered owners thereof as of the record dates specified in the Sales Certificates.

(f) Pursuant to Section 5.04 of the Master Resolution, the Sales Certificates shall specify whether the 2024 Bonds or any series or subseries thereof are to be secured by (A) the Reserve Fund, (B) a separate debt service reserve fund, or (C) neither (A) nor (B). If the Sales Certificates provide that the 2024 Bonds or any series or subseries thereof are to be secured by a separate debt service reserve fund, such Sales Certificates may provide for the creation of such funds or accounts in furtherance thereof as may be deemed appropriate in the Treasurer’s discretion, and such funds or accounts shall be held in trust by the District or the Trustee, as specified in the Sales Certificates, solely for the benefit of the Holders of the 2024 Bonds or applicable series or subseries thereof, and is hereby pledged solely to the payment of the 2024 Bonds or applicable series or subseries thereof, subject to the application thereof for the purposes set forth in the Sales Certificates. If a separate debt service reserve fund is so created, the Sales Certificates may further specify such other terms and provision relating thereto, as in the Treasurer’s discretion are appropriate, including, without implied limitation, the minimum

balance required to be maintained on deposit therein, the purposes for which moneys on deposit therein may or shall be applied, the terms on which any deficiencies therein are to be replenished, additional limitations concerning investment of moneys therein and the valuation thereof, and provisions concerning the deposit of credit instruments in lieu of cash therein.

(g) The Sales Certificates shall designate the series, amounts and maturity or sinking fund payment dates of the Refunded Bonds.

Section 146.02 Redemption of 2024 Bonds. The 2024 Bonds or any series or subseries thereof shall be subject to redemption on the terms set forth below and in the Sales Certificates (which may specify that some or all of the 2024 Bonds will not be subject to redemption).

(a) Notice of Redemption. If any of the 2024 Bonds are subject to redemption, then in addition to the notice of redemption required to be given pursuant to Article IV of the Master Resolution, the Trustee shall mail, by first class mail, postage prepaid, notice of redemption of any 2024 Bond to the Securities Depositories. Failure of the Trustee to give notice of redemption to any Securities Depository, or any defect therein, however, shall not affect the sufficiency of the proceedings of redemption with respect to any 2024 Bond. For purposes of this paragraph, the following term shall have the following meaning:

“Securities Depositories” means DTC, 55 Water Street, 50th Floor, New York, N.Y. 10041-0099 Attn. Call Notification Department, Fax (212) 855-7232; or, in accordance with the current guidelines of the Securities and Exchange Commission, to such other address and/or such other securities depositories as the District may designate to the Trustee in writing.

Notwithstanding any contrary provision of Article IV of the Master Resolution or this Sixty-Seventh Supplemental Resolution, (1) publication of any notice of redemption shall not be required with respect to the 2024 Bonds, so long as such 2024 Bonds are in full book-entry form, (2) any notice of redemption of the 2024 Bonds shall be mailed not less than twenty (20) nor more than sixty (60) days prior to the redemption date, and (3) any notice of optional redemption of 2024 Bonds may be made conditional on the receipt of money or any other condition.

(b) Redemption Otherwise Subject to Article IV. Except as in this Section and in the Sales Certificates otherwise provided, the redemption of 2024 Bonds shall be subject to the provisions of Article IV of the Master Resolution.

Section 146.03 Deposits to Interest Fund and Principal Account. Notwithstanding any contrary provision of the Resolution, the Treasurer, out of Net Revenues received by the District, shall set aside in the Interest Fund and the Principal Account, respectively, such amounts as may be required so that an amount equal to the amount of principal and/or interest becoming due and payable on the 2024 Bonds on each interest payment date and principal payment date is on deposit in the Interest Fund and the Principal Account,

respectively, at such time on or prior to such interest payment date or principal payment date as shall be specified in the Sales Certificates.

Section 146.04 2024 Sinking Fund.

(a) An account is hereby established within the Sinking Fund created by Section 5.02 of the Master Resolution to be designated the “2024 Sinking Fund.” On or before each minimum sinking fund payment date for any 2024 Bonds set forth in the Sales Certificates, the Treasurer shall deposit in the 2024 Sinking Fund, out of Net Revenues received by the District, such amounts as may be required to cause the balance therein to be equal to the amount of the minimum sinking fund payment due and payable on the 2024 Bonds on such minimum sinking fund payment date as set forth in the Sales Certificates.

(b) The District shall apply all such minimum sinking fund payments, as rapidly as practicable, to the purchase of 2024 Bonds at public or private sale, as and when and at such prices (including brokerage and other expenses, but excluding accrued interest, which is payable from the Interest Fund) as the District may in its discretion determine.

(c) If on the first day of the month preceding the month in which a minimum sinking fund payment date occurs, as set forth in the Sales Certificates, the moneys in the 2024 Sinking Fund equal or exceed \$25,000, such moneys shall be applied by the District to the redemption on such minimum sinking fund payment date of as many 2024 Bonds as such moneys in the 2024 Sinking Fund shall suffice to redeem at a redemption price equal to the principal amount thereof (except that accrued interest on such 2024 Bonds so called for redemption shall be paid from the Interest Fund). All 2024 Bonds purchased or redeemed under the provisions of this Section shall be delivered to, and canceled by, the Trustee and shall not be reissued.

(d) No application of any moneys to the retirement of 2024 Bonds shall operate to impair or affect the obligation of the District to make minimum sinking fund payments for 2024 Bonds in the amounts and at the times provided in this Section; however, the District shall not be deemed to be in default with respect to any 2024 Bonds minimum sinking fund payment for any minimum sinking fund payment date if at all times prior to such minimum sinking fund payment date the District shall have fixed rates and charges as required by Section 6.08 of the Master Resolution, and if at such minimum sinking fund payment date the aggregate principal amount of all 2024 Bonds theretofore purchased or redeemed through the operation of the 2024 Sinking Fund or otherwise (together with any moneys then in the 2024 Sinking Fund) equals or exceeds the aggregate amount of minimum sinking fund payments for 2024 Bonds then and theretofore required to be made pursuant to this Section.

(e) Any moneys remaining in the 2024 Sinking Fund after all 2024 Bonds have been retired shall be returned to the District for any lawful District use.

Section 146.05 Form of 2024 Bonds. The 2024 Bonds, and the certificate of authentication and registration to be executed thereon, shall be in substantially the form set forth as Appendix A to this Sixty-Seventh Supplemental Resolution. The series or subseries designations, numbers, maturity dates, interest rates, method or methods of determining interest

rates, redemption provisions and other terms of the 2024 Bonds shall be inserted therein in conformity with the Sales Certificates.

Section 146.06 Issuance of 2024 Bonds.

(a) At any time after the adoption of this Sixty-Seventh Supplemental Resolution and the execution and delivery of the applicable Sales Certificate, the District may execute and deliver 2024 Bonds in the aggregate principal amount set forth in the applicable Sales Certificate, but not to exceed the aggregate principal amount described in Section 146.01(c).

(b) The Trustee shall authenticate and deliver the 2024 Bonds upon written order of the District.

(c) The proceeds of the sale of the 2024 Bonds shall be set aside and applied by the Treasurer as set forth in the Sales Certificates.

Section 146.07 Refunding of 2024 Bonds. If Refunding Bonds are issued for the purpose of refunding 2024 Bonds, then, in addition to any other provisions of Section 3.05 of the Master Resolution, the District is authorized to apply proceeds of the sale of such Refunding Bonds to the payment of the purchase price of direct non-callable obligations of the United States of America (“Treasury Obligations”) to be held by the Trustee to insure the payment or retirement at or before maturity of all or a portion of the outstanding 2024 Bonds. Upon deposit with the Trustee, in trust, of money or Treasury Obligations (including, but not limited to, direct obligations of the United States of America issued in book-entry form on the books of the Department of the Treasury of the United States of America), or any combination thereof, sufficient, together with the interest to accrue on any such Treasury Obligations, to pay or redeem all or a portion of 2024 Bonds then outstanding at or before their maturity date, provided that, in the case of 2024 Bonds which are to be redeemed prior to maturity, notice of such redemption shall have been given as provided in Article IV of the Master Resolution or provision satisfactory to the Trustee shall have been made for the giving of such notice, all liability of the District in respect of such 2024 Bonds shall cease, determine and be completely discharged, and the holders thereof shall thereafter be entitled only to payment by the District out of the money and Treasury Obligations deposited with the Trustee as aforesaid for their payment, subject, however, to the provisions of Section 10.03 of the Master Resolution. If the liability of the District shall cease and determine with respect to all or a portion of the 2024 Bonds as above provided, then said 2024 Bonds shall not be considered to be outstanding Bonds for any purpose of the Master Resolution or of this Sixty-Seventh Supplemental Resolution.

Section 146.08 Use of Depository. Notwithstanding any provision of the Master Resolution or this Sixty-Seventh Supplemental Resolution to the contrary:

(a) The 2024 Bonds shall be initially issued as provided in Section 146.01. Registered ownership of the 2024 Bonds, or any portion thereof, may not thereafter be transferred except:

(i) To any successor of DTC or its nominee, or to any substitute depository designated pursuant to clause (ii) of this subsection (a) (“substitute

depository”); provided that any successor of DTC or substitute depository shall be qualified under any applicable laws to provide the service proposed to be provided by it;

(ii) To any substitute depository not objected to by the Trustee, upon (1) the resignation of DTC or its successor (or any substitute depository or its successor) from its functions as depository or (2) a determination by the District that DTC or its successor (or any substitute depository or its successor) is no longer able to carry out its functions as depository; provided that any such substitute depository shall be qualified under any applicable laws to provide the services proposed to be provided by it; or

(iii) To any person as provided below, upon (1) the resignation of DTC or its successor (or substitute depository or its successor) from its functions as depository; provided that no substitute depository which is not objected to by the Trustee can be obtained or (2) a determination by the District that it is in the best interests of the District to remove DTC or its successor (or any substitute depository or its successor) from its functions as depository.

(b) In the case of any transfer pursuant to clause (i) or clause (ii) of Section 140.08(a) hereof, upon receipt of all outstanding 2024 Bonds by the Trustee, together with a Certificate of the District to the Trustee, a single new 2024 Bond shall be executed and delivered for each maturity of each series of 2024 Bonds then outstanding registered in the name of such successor or such substitute depository, or their nominees, as the case may be, all as specified in such Certificate of the District. In the case of any transfer pursuant to clause (iii) of Section 146.08(a) hereof, upon receipt of all outstanding 2024 Bonds by the Trustee together with a Certificate of the District to the Trustee, new 2024 Bonds shall be executed, authenticated and delivered in such denominations and registered in the names of such persons as are requested in such a Certificate of the District, subject to the limitations of Section 146.08(a) hereof, provided the Trustee shall not be required to deliver such new 2024 Bonds within a period less than 60 days from the date of receipt of such a Certificate of the District. Subsequent to any transfer pursuant to clause (iii) of Section 146.08(a) hereof, the 2024 Bonds shall be transferred as provided in Article II of the Master Resolution.

(c) In the case of partial redemption or refunding of the 2024 Bonds of a series evidencing all or a portion of the principal maturing in a particular year, DTC shall make an appropriate notation on such 2024 Bonds indicating the date and amounts of such reduction in principal. The Trustee shall incur no liability for the failure or any error by DTC in making such notation and the records of the Trustee shall be determinative of the outstanding principal amount of 2024 Bonds.

(d) The District and the Trustee shall be entitled to treat the person in whose name any 2024 Bond is registered as the Bondholder thereof for all purposes of the Master Resolution and any applicable laws, notwithstanding any notice to the contrary received by the Trustee or the District; and the District and the Trustee shall have no responsibility for transmitting payments to, communicating with, notifying, or otherwise dealing with, any beneficial owners of the 2024 Bonds. Neither the District nor the Trustee will have any responsibility or obligations, legal or otherwise, to the beneficial owners or to any other party

including DTC or its successor (or substitute depository or its successor), except for the holder of any 2024 Bond.

(e) So long as the outstanding 2024 Bonds are registered in the name of Cede & Co. or its registered assigns, the District and the Trustee (to the extent funds are provided to it by the District) shall cooperate with Cede & Co., as sole registered Bondholder, and its registered assigns, in effecting payment of the principal of and redemption premium, if any, and interest on the 2024 Bonds by arranging for payment in such manner that funds for such payments are properly identified and are made immediately available on the date they are due.

Section 146.09 Tax Covenants.

(a) The District shall at all times do and perform all acts and things permitted by law which are necessary or desirable in order to assure that interest paid on the 2024 Bonds (or any of them) will be excluded from gross income for federal income tax purposes and shall take no action that would result in such interest not being excluded from gross income for federal income tax purposes. Without limiting the generality of the foregoing, the District agrees to comply with the provisions of each Tax Certificate of the District, dated the date of issuance of the applicable 2024 Bonds, as amended from time to time in accordance with its terms (collectively, the “Tax Certificate”). This covenant shall survive payment in full or defeasance of the 2024 Bonds.

(b) Without limiting the generality of the foregoing, the District agrees that there shall be paid from time to time all amounts required to be rebated to the United States of America pursuant to Section 148(f) of the Internal Revenue Code of 1986 (the “Code”) and any temporary, proposed or final United States Treasury Regulations as may be applicable to the 2024 Bonds from time to time (the “Rebate Requirement”). The District specifically covenants to pay or cause to be paid the Rebate Requirement as provided in the Tax Certificate to the United States of America from any Net Revenues lawfully available to the District. This covenant shall survive payment in full or defeasance of the 2024 Bonds. Capitalized terms in this Section not otherwise defined in the Master Resolution or this Sixty-Seventh Supplemental Resolution shall have the meanings ascribed to them in the Tax Certificate.

(c) Notwithstanding any provision of this Section, if the District shall obtain an opinion of counsel of recognized national standing in the field of obligations the interest on which is excluded from gross income for purposes of federal income taxation to the effect that any specified action required under this Section is no longer required, or to the effect that some different action is required, to maintain the exclusion from gross income of the interest on the 2024 Bonds under Section 103 of the Code, the District may rely conclusively on such opinion in complying with the provisions hereof, and the agreements and covenants hereunder shall be deemed to be modified to that extent without the necessity of an amendment of the Master Resolution or this Sixty-Seventh Supplemental Resolution or the consent at any time of the Bondholders.

(d) This Section 146.09 shall be inapplicable to the 2024 Bonds, if any, issued bearing interest included in gross income for federal income tax purposes, as set forth in the applicable Sales Certificate.

Section 146.10 Terms of 2024 Bonds Subject to the Master Resolution.

(a) Except as in this Sixty-Seventh Supplemental Resolution expressly provided, every term and condition contained in the Master Resolution shall apply to this Sixty-Seventh Supplemental Resolution and to the 2024 Bonds with the same force and effect as if the same were herein set forth at length, with such omissions, variations and modifications thereof as may be appropriate to make the same conform to this Sixty-Seventh Supplemental Resolution.

(b) This Sixty-Seventh Supplemental Resolution and all the terms and provisions herein contained shall form part of the Master Resolution as fully and with the same effect as if all such terms and provisions had been set forth in the Master Resolution. The Master Resolution is hereby ratified and confirmed and shall continue in full force and effect in accordance with the terms and provisions thereof, as supplemented and amended hereby.

Section 146.11 Continuing Disclosure. The District hereby covenants and agrees that it will comply with and carry out all of the provisions of each Continuing Disclosure Agreement dated the date of issuance of the applicable 2024 Bonds (collectively, the “Continuing Disclosure Agreement”). Notwithstanding any other provision of the Master Resolution or this Sixty-Seventh Supplemental Resolution, failure of the District or the Trustee to comply with the Continuing Disclosure Agreement shall not be considered an Event of Default; however, the Trustee shall, at the written request of any Participating Underwriter (as defined in the Continuing Disclosure Agreement) or the Holders of at least 25% aggregate principal amount of outstanding 2024 Bonds upon receipt of indemnity satisfactory to the Trustee or any Holder of 2024 Bonds or Beneficial Owner may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the District to comply with its obligations under this Section. For purposes of this Section, “Beneficial Owner” means any person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any 2024 Bonds (including persons holding 2024 Bonds through nominees, depositories or other intermediaries).

ARTICLE CXLVII

INSURANCE PROVISIONS

Section 147.01 Insurance Agreements. Each Insurance Agreement, if any, is hereby incorporated in this Sixty-Seventh Supplemental Resolution by this reference, and the District covenants and agrees to comply with the terms and conditions thereof. The District further declares, covenants and agrees that the terms and conditions of each Insurance Agreement, if any, shall govern, with respect to the applicable 2024 Bonds, the rights and responsibilities of the District, the Trustee, the applicable Bond Insurer and the holders of the applicable 2024 Bonds, to the extent such terms and conditions may be inconsistent with any other provision of the Master Resolution, as amended and supplemented, including as supplemented by this Sixty-Seventh Supplemental Resolution.

ARTICLE CXLVIII

AMENDMENT OF MASTER RESOLUTION

Section 148.01 Amendment of Master Resolution. The District intends to amend the Master Resolution substantially in the form of Appendix B to this Sixty-Seventh Supplemental Resolution (the “Proposed Amendments”). The purchasers of the 2024 Bonds, by virtue of their purchase of the 2024 Bonds, have consented to the Proposed Amendments. Pursuant to Section 8.03 of the Master Resolution, the Proposed Amendments shall become effective when the written consents of the holders and registered owners of 60% of the Bonds then outstanding have been filed with the District or the Trustee.

APPENDIX A
FORM OF BOND

No. R- _____

\$ _____

SACRAMENTO MUNICIPAL UTILITY DISTRICT
ELECTRIC REVENUE [REFUNDING] BOND
2024 SERIES []

Maturity

Interest Per Annum

Date

CUSIP

REGISTERED OWNER: CEDE & CO.

PRINCIPAL AMOUNT:

SACRAMENTO MUNICIPAL UTILITY DISTRICT, a municipal utility district duly organized and existing under and pursuant to the laws of the State of California (hereinafter called the "District"), for value received, hereby promises to pay (but only out of the Net Revenues hereinafter referred to) to the registered owner named above or registered assigns, on the maturity date specified above, the principal sum specified above together with interest thereon from the date of initial delivery hereof, until the principal hereof shall have been paid, at the interest rate per annum specified above, payable on [] and [] of each year, commencing []. Interest hereon is payable in lawful money of the United States of America by check or draft mailed on each interest payment date to the registered owner as of the first day of the month (whether or not a business day) in which an interest payment date occurs. Interest hereon shall be calculated on the basis of a 360-day year consisting of twelve 30-day months. At the option of the owners of \$1,000,000 or more in aggregate principal amount of Bonds of this series, interest hereon is also payable in lawful money of the United States of America by wire transfer to such address as has been furnished to the Trustee in writing by the registered owner hereof at least 15 days prior to the interest payment date for which such payment by wire transfer is requested. The principal hereof is payable at the designated corporate trust office of U.S. Bank Trust Company, National Association, the Trustee, in lawful money of the United States of America.

This Bond is one of a duly authorized issue of Sacramento Municipal Utility District Electric Revenue Bonds (hereinafter called the "Bonds") of the series and designation indicated on the face hereof. Said authorized issue of Bonds is not limited in aggregate principal amount, except as otherwise provided in the Resolution hereinafter mentioned, and consists or may consist of one or more series of varying denominations, dates, maturities, interest rates and other provisions, as in said Resolution provided, all issued and to be issued pursuant to the provisions of the Revenue Bond Law of 1941 as made applicable by Article 6a of Chapter 6 of Division 6 of the California Public Utilities Code and Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (hereinafter called the "Act"). This

Bond is issued pursuant to a resolution of the Board of Directors of the District, adopted January 7, 1971, providing for the issuance of the Bonds, as amended and supplemented (the “Resolution”), including as amended and supplemented by a Sixty-Seventh Supplemental Resolution, adopted March 21, 2024, authorizing the issuance of the 2024 Series [] Bonds. Reference is hereby made to the Resolution and the Act for a description of the terms on which the Bonds are issued and to be issued, the provisions with regard to the nature and extent of the Revenues, as that term is defined in the Resolution, and the rights of the registered owners of the Bonds; and all the terms of the Resolution and the Act are hereby incorporated herein and constitute a contract between the District and the registered owner from time to time of this Bond, and to all the provisions thereof the registered owner of this Bond, by its acceptance hereof, consents and agrees. Additional bonds may be issued on a parity with the Bonds of this authorized issue, but only subject to the conditions and limitations contained in the Resolution.

The Bonds and the interest thereon (to the extent set forth in the Resolution), together with the Parity Bonds (as defined in the Resolution) heretofore or hereafter issued by the District, and the interest thereon, are payable from, and are secured by a charge and lien on, the Net Revenues derived by the District from the Electric System (as those terms are defined in the Resolution). The District hereby covenants and warrants that for the payment of the Bonds and interest thereon, there have been created and will be maintained by the District special funds into which there shall be deposited from Net Revenues available for that purpose sums sufficient to pay the principal of, and interest on, all of the Bonds, as such principal and interest become due, and as an irrevocable charge the District has allocated Net Revenues to such payment, all in accordance with the Resolution.

The Bonds are special obligations of the District, and are payable, both as to principal and interest, out of the Net Revenues pertaining to the Electric System, and not out of any other fund or moneys of the District. No holder of this Bond shall ever have the right to compel any exercise of the taxing power of the District to pay this Bond or the interest hereon.

[The 2024 Series [] Bonds are not subject to redemption.][**Redemption Terms to be Determined at Time of Sale and Conformed to the applicable Official Statement and applicable Sales Certificate**]

This Bond is transferable by the registered owner hereof, in person or by the attorney of such owner duly authorized in writing, at the designated corporate trust office of the Trustee but only in the manner, subject to the limitations and upon payment of the charges provided in the Resolution, and upon surrender and cancellation of this Bond. Upon such transfer a new fully registered Bond or Bonds without coupons, of authorized denomination or denominations, for the same aggregate principal amount and maturity will be issued to the transferee in exchange herefor. No transfer of this Bond will be made during the 15 days next preceding each interest payment date.

The District, the Trustee and any paying agent may deem and treat the registered owner hereof as the absolute owner hereof for all purposes, and the District, the Trustee and any paying agent shall not be affected by any notice to the contrary.

The rights and obligations of the District and of the holders and registered owners of the Bonds may be modified or amended at any time in the manner, to the extent, and upon the terms provided in the Resolution, provided that no such modification or amendment shall (i) extend the fixed maturity of any Bond, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon, or reduce the amount of any premium payable upon the redemption hereof, without the consent of the holder of each Bond so affected, or (ii) reduce the percentage of Bonds required for the affirmative vote or written consent to an amendment or modification, without the consent of the holders of all the Bonds then outstanding, or (iii) without its written consent thereto, modify any of the rights or obligations of the Trustee.

It is hereby certified and recited that any and all acts, conditions and things required to exist, to happen and to be performed, precedent to and in the incurring of the indebtedness evidenced by this Bond, and in the issuing of this Bond, do exist, have happened and have been performed in due time, form and manner, as required by the Constitution and statutes of the State of California, and that this Bond, together with all other indebtedness of the District pertaining to the Electric System, is within every debt and other limit prescribed by the Constitution and the statutes of the State of California, and is not in excess of the amount of Bonds permitted to be issued under the Resolution.

This Bond shall not be entitled to any benefit under the Resolution, or become valid or obligatory for any purpose, until the certificate of authentication hereon endorsed shall have been signed by the Trustee.

IN WITNESS WHEREOF, SACRAMENTO MUNICIPAL UTILITY DISTRICT has caused this Bond to be executed in its name and on its behalf by the facsimile signature of the President of its Board of Directors and by the facsimile signature of its Treasurer and countersigned by the facsimile signature of its Secretary, and the seal of the District to be reproduced hereon by facsimile, and this Bond to be dated as of the date first written above.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By _____
President of the Board of Directors

By _____
Treasurer of the District

(SEAL)

Countersigned:

Secretary of the District

CERTIFICATE OF AUTHENTICATION AND REGISTRATION

This is one of the Bonds described in the within-mentioned Resolution and registered on the date set forth below.

Dated: U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION, as Trustee

By _____
Authorized Officer

ASSIGNMENT

For value received _____ hereby sell, assign and transfer unto _____ whose taxpayer identification number is _____ the within-mentioned Bond and hereby irrevocably constitute and appoint _____ attorney, to transfer the same on the books of the District at the office of the Trustee, with full power of substitution in the premises.

NOTE: The signature to this Assignment must correspond with the name on the face of the within Registered Bond in every particular, without alteration or enlargement or any change whatsoever.

Dated: _____

Signature Guaranteed by:

NOTE: Signature must be guaranteed by an eligible guarantor institution

APPENDIX B

FORM OF PROPOSED AMENDMENTS TO MASTER RESOLUTION

SACRAMENTO MUNICIPAL UTILITY DISTRICT

RESOLUTION NO. __-__-__

_____ SUPPLEMENTAL RESOLUTION

AMENDING RESOLUTION NO. 6649

(Supplemental to Resolution No. 6649
Adopted January 7, 1971)

Adopted: _____, 20__

RESOLUTION NO. __-__-__

**Supplemental Resolution
(Supplemental to Resolution No. 6649,
Adopted January 7, 1971)
Amending Resolution No. 6649**

WHEREAS, the Board of Directors (the "Board") of the Sacramento Municipal Utility District (the "District"), on January 7, 1971, adopted its Resolution No. 6649 (as previously supplemented and amended, herein called the "Master Resolution") providing for the issuance of the District's Electric Revenue Bonds (the "Bonds");

WHEREAS, Section 8.03 of the Master Resolution provides that the District may amend the Master Resolution by a supplemental resolution to be effective when there shall have been filed with the District or the Trustee the written consents of the holders and registered owners of 60% of the Bonds then outstanding;

WHEREAS, the Board has determined to amend Sections 1.03, 3.02, 3.06, 5.04 and 6.08 of the Master Resolution, which amendments the Board deems necessary and desirable and not inconsistent with the Master Resolution;

WHEREAS, the District has obtained the consents of the holders and registered owners of 60% of the Bonds outstanding;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Sacramento Municipal Utility District, as follows:

ARTICLE _____

AMENDMENT OF MASTER RESOLUTION

SECTION _____. Amendment of Section 1.03 of Master Resolution. A new definition of "Subsidy" shall be added to Section 1.03 of the Master Resolution in correct alphabetical order to read as follows:

'Subsidy

"Subsidy" means any subsidy, reimbursement or other payment from the federal government of the United States of America under the American Recovery and Reinvestment Act of 2009 (or any similar legislation or regulation of the federal government of the United States of America or any other governmental entity or any extension of any of such legislation or regulation).'

SECTION _____. Amendment of Section 3.02 of Master Resolution. A new paragraph shall be added to the end of Section 3.02 of the Master Resolution to read as follows:

“For purposes of the calculations specified in this Section 3.02: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that the District receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by the District with respect to or in connection with such Parity Bonds during such period of time.”

SECTION _____. Amendment of Section 3.06 of Master Resolution. A new paragraph shall be added to the end of Section 3.06 of the Master Resolution to read as follows:

“For purposes of the calculations specified in this Section 3.06: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that the District receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by the District with respect to or in connection with such Parity Bonds during such period of time.”

SECTION _____. Amendment of Section 5.04 of Master Resolution. A new paragraph shall be added to the end of Section 5.04 of the Master Resolution to read as follows:

“For purposes of calculating the “debt service ratio” and, unless otherwise specified in a Supplemental Resolution providing for the issuance of a series of Parity Bonds, the amount required to be maintained in the Reserve Fund pursuant to this Section 5.04: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that the District receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by the District with respect to or in connection with such Parity Bonds during such period of time.”

SECTION _____. Amendment of Section 6.08 of Master Resolution. A new paragraph shall be added to the end of Section 6.08 of the Master Resolution to read as follows:

“For purposes of the calculations specified in this Section 6.08: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that the District receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by the District with respect to or in connection with such Parity Bonds during such period of time.”

Adopted: _____, 20__

INTRODUCED BY DIRECTOR				
SECONDED BY DIRECTOR				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT

**DRAFT RESOLUTION AUTHORIZING EXECUTION OF
BOND-RELATED DOCUMENTS**

**RESOLUTION NO. _____ OF
THE BOARD OF DIRECTORS OF
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUTHORIZING THE EXECUTION AND DELIVERY OF ONE OR MORE
CONTRACTS OF PURCHASE, OFFICIAL STATEMENTS AND CONTINUING
DISCLOSURE AGREEMENTS, THE DISTRIBUTION OF OFFICIAL STATEMENTS,
AND CERTAIN OTHER ACTIONS RELATING TO THE ISSUANCE AND SALE OF
ONE OR MORE SERIES OR SUBSERIES OF THE DISTRICT'S ELECTRIC
REVENUE BONDS, THE REFUNDING OF ALL OR A PORTION OF ONE OR MORE
SERIES OF THE DISTRICT'S ELECTRIC REVENUE BONDS AND CERTAIN OTHER
MATTERS RELATING THERETO**

BE IT RESOLVED, by the Board of Directors of the Sacramento Municipal Utility District (the "District"), as follows:

Section 1. Sale of Bonds. One or more series or subseries of the District's Electric Revenue Bonds (collectively, the "Bonds"), are hereby authorized to be sold to the underwriters thereof in one or more negotiated sales at the prices and otherwise upon the terms and conditions determined on the sale dates thereof by the Chief Executive Officer and General Manager, any Member of the Executive Committee, the Treasurer, the Secretary or the Chief Financial Officer or the designee of any such officer (each an "Authorized Officer"), as specified in one or more Sales Certificates relating to the Bonds (the "Sales Certificates") authorized under the supplemental resolution authorizing the issuance of the Bonds adopted by the Board of Directors of the District on the date hereof.

Section 2. Contracts of Purchase. The forms of Contracts of Purchase with respect to the Bonds (the "Contracts of Purchase") between the District and the underwriters named therein (the "Underwriters"), in the forms submitted to this meeting are hereby approved. Any Authorized Officer, acting alone, is authorized and directed to execute and deliver one or more Contracts of Purchase in substantially such forms for the Bonds or any series or subseries thereof on behalf of the District, subject to such additions thereto and changes therein as any Authorized Officer shall approve after consultation with the District's counsel (such approval to be conclusively evidenced by the execution of such Contracts of Purchase).

Section 3. Official Statements. The Official Statements of the District relating to the Bonds (the "Official Statements") in substantially the forms submitted to this meeting are hereby approved. Any Authorized Officer, acting alone, is authorized and directed to execute and deliver the Official Statements relating to the Bonds in substantially such forms on behalf of the District, subject to such additions thereto and changes therein as any Authorized Officer shall approve after consultation with the District's counsel and subject to such further changes as may be consistent with the Sales Certificates (such approval to be conclusively evidenced by the execution of such Official Statements). The Underwriters are authorized to distribute the Official Statements in preliminary form to persons who may be interested in the purchase of the Bonds and the Official Statements in final form to purchasers of the Bonds.

Section 4. Continuing Disclosure Agreements. The forms of Continuing Disclosure Agreements relating to the Bonds between the District and U.S. Bank Trust Company, National Association, as dissemination agent (the “Continuing Disclosure Agreements”) in the forms attached to the Official Statements submitted to this meeting are hereby approved. Any Authorized Officer, acting alone, is authorized and directed to execute and deliver the Continuing Disclosure Agreements in substantially such forms on behalf of the District, subject to such additions thereto and changes therein as any Authorized Officer shall approve after consultation with the District’s counsel (such approval to be conclusively evidenced by the execution of such Continuing Disclosure Agreements).

Section 5. Bond Insurance. Any Authorized Officer, acting alone, is hereby authorized to do any and all things and to negotiate, execute, deliver, and perform any and all agreements and documents which they deem necessary or advisable in order to procure bond insurance for all or any portion of the Bonds including without limitation one or more commitments for a bond insurance policy and one or more insurance agreements; provided that such insurance and such agreements and documents are determined by any Authorized Officer to be reasonable under the circumstances and to be consistent with the provisions and intent of this resolution. The power to make such determination is hereby delegated to each Authorized Officer and shall be conclusively evidenced by the execution and delivery of the insurance agreements and insurance commitments. Any actions heretofore taken by any Authorized Officer in furtherance of this Section are hereby ratified, confirmed and approved.

Section 6. Determinations Relating to Redemption of Refunded Bonds. The Board of Directors of the District hereby finds and determines that an “Extraordinary Event” has occurred with respect to the District’s Electric Revenue Bonds, 2009 Series V (the “2009 Series V Bonds”) and, therefore, the 2009 Series V Bonds are subject to extraordinary optional redemption on the terms set forth in Section 6 of the Sales Certificate relating to the 2009 Series V Bonds, dated May 5, 2009. The Board of Directors of the District hereby finds and determines that a “Tax Law Change” has occurred with respect to the District’s Electric Revenue Bonds, 2010 Series W (the “2010 Series W Bonds”) and, therefore, the 2010 Series W Bonds are subject to extraordinary optional redemption as set forth in Section 6 of the Sales Certificate relating to the 2010 Series W Bonds, dated July 21, 2010. BofA Securities, Inc., or such other investment banking institution meeting the requirements therefore and subsequently designated by any Authorized Officer as such, is hereby designated and authorized to act as the “Designated Banking Institution” with respect to the 2010 Series W Bonds in connection with transactions contemplated by this resolution and the supplemental resolution approving the issuance of the Bonds. The Authorized Officers and other officers of the District are hereby authorized to do any and all things, execute and deliver any and all documents, and make any and all determinations and/or calculations which they deem necessary or advisable in order to redeem the 2009 Series V Bonds and/or the 2010 Series W Bonds, including the designation of such other financial institutions and/or consultants as they deem necessary or advisable to assist the District with the making of any such determinations and/or calculations.

Section 7. Other Related Actions. The Authorized Officers and other officers of the District are hereby authorized and directed to do any and all things and to negotiate, execute, deliver and perform any and all agreements and documents (including one or more escrow agreements for the purpose of refunding outstanding bonds) which they deem necessary

or advisable in order to consummate the issuance, sale and delivery of the Bonds, to provide for credit enhancement of the Bonds, and to effectuate the purposes of this resolution and the transactions contemplated by this resolution, the supplemental resolution authorizing the issuance of the Bonds, the Sales Certificates, and the documents approved hereby, including the payment to the United States Treasury or other applicable federal agency of any rebate or other repayment of a portion of the federal subsidy payments received with respect to the 2009 Series V Bonds and/or the 2010 Series W Bonds as may be required in connection with the refunding of the 2009 Series V Bonds and/or the 2010 Series W Bonds, and including any subsequent amendments, directions, waivers or consents entered into or given in accordance with such documents, and that any actions heretofore taken and any agreements and documents heretofore executed and delivered by the officers of the District to consummate the issuance, sale and delivery of the Bonds, to provide for credit enhancement of the Bonds, and to effect the purpose of these resolutions and the transactions contemplated thereby are hereby ratified and confirmed.

DRAFT CONTRACT OF PURCHASE

[2024 SERIES M]

SACRAMENTO MUNICIPAL UTILITY DISTRICT
[\$[PAR] Electric Revenue Bonds, 2024 Series M

CONTRACT OF PURCHASE

[SALE DATE]

Honorable Board of Directors
Sacramento Municipal Utility District
6201 S Street
Sacramento, California 95817-1899

Dear Directors:

The undersigned J.P. Morgan Securities LLC, BofA Securities, Inc., Barclays Capital Inc., Goldman Sachs & Co. LLC, Morgan Stanley & Co. LLC, and Wells Fargo Bank, National Association (herein collectively referred to as the “Underwriters”), acting for and on behalf of themselves, offer to enter into this Contract of Purchase (the “Contract of Purchase”) with the Sacramento Municipal Utility District (the “District”) which, upon the District’s acceptance, will be binding upon the District and upon the Underwriters. J.P. Morgan Securities LLC has been duly authorized to execute this Contract of Purchase and to act hereunder by and based on representations made to it under an Agreement Among Underwriters dated [_____] on behalf of the Underwriters as the Senior Managing Underwriter (the “Senior Underwriter”). This offer is made subject to the District’s acceptance on or before 5:00 p.m., Sacramento time, on the date hereof, and if not so accepted, will be subject to withdrawal by the Underwriters upon notice delivered to the District at any time prior to the acceptance hereof by the District.

1. **Purchase, Sale and Delivery of the Bonds.** Subject to the terms and conditions and in reliance upon the representations, warranties and agreements herein set forth, the Underwriters, jointly and severally, hereby agree to purchase from the District, and the District hereby agrees to sell to the Underwriters, all (but not less than all) of the \$[PAR] aggregate principal amount of the Sacramento Municipal Utility District Electric Revenue Bonds, 2024 Series M [(Green Bonds – Climate Bond Certified)] (the “Bonds”), dated [CLOSING DATE], bearing interest as set forth in the Official Statement (as hereinafter defined) of the District relating to the Bonds in each year until maturity or earlier redemption at the rates and maturing on the dates and in the amounts set forth in the Official Statement. The purchase price for the Bonds shall be \$[PURCHASE PRICE] (consisting of the principal amount of the Bonds of \$[PAR] plus/minus

[net] original issue premium/discount of \$[_____] and minus an Underwriters' discount of \$[_____]).

(b) The Bonds shall be substantially in the form described in, shall be issued and secured under the provisions of, and shall be payable as provided in, Resolution No. 6649, adopted by the Board of Directors of the District on January 7, 1971 (the "Master Resolution"), as heretofore amended and supplemented, including the amendments and supplements thereto made by Resolution No. [RESO NO.], adopted by the Board of Directors on March 21, 2024 (the "Sixty-Seventh Supplemental Resolution"). The Master Resolution, as supplemented and amended as described in this Contract of Purchase, is herein called the "Resolution." The Bonds are authorized to be issued pursuant to applicable California law, including the Municipal Utility District Act (Sections 12850 to 12860 of the Public Utilities Code), the Revenue Bond Law of 1941 (Government Code Section 54300 *et seq.*), Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (Section 53580 *et seq.*) and the Resolution. The Bonds will be special obligations of the District payable exclusively from, and are secured by a pledge (effected in the manner and to the extent provided in the Resolution) of, the Net Revenues (as defined in the Resolution). The Bonds shall be payable and shall be subject to redemption as provided in the Resolution.

(c) The proceeds of the Bonds will be used to [(i)] finance and refinance certain improvements and additions to the District's Electric System, including by paying the outstanding principal amount of the District's commercial paper notes at maturity[, and (ii) to pay certain costs associated with the issuance of the Bonds].

(d) The District has heretofore delivered to the Underwriters copies of the Preliminary Official Statement dated [POS DATE] relating to the Bonds (the "Preliminary Official Statement") in connection with the public offering of the Bonds. The Preliminary Official Statement was deemed final by the District as of the date thereof in accordance with paragraph (b)(1) of Rule 15c2-12 of the Securities and Exchange Commission ("Rule 15c2-12"), except for the information not required to be included therein under Rule 15c2-12.

(e) The District shall prepare and deliver to the Underwriters, as promptly as practicable, but in any event not later than two business days prior to the Closing Date (as defined below) or seven business days from the date hereof, a final official statement, with such changes and amendments as may be agreed to by the Underwriters, in such quantities as the Underwriters may reasonably request in order to comply with paragraph (b)(4) of Rule 15c2-12 and the rules of the Municipal Securities Rulemaking Board ("MSRB") (such official statement, including the cover page and Appendices thereto, as the same may be supplemented or amended pursuant to paragraph (i) of Section 2 hereof, is herein referred to as the "Official Statement"). In addition, the District will provide, subject to customary disclaimers regarding the transmission of electronic copies, an electronic copy of the final Official Statement to the Underwriters in the currently required designated electronic format stated in MSRB Rule G-32 and the EMMA Dataport Manual (as defined below). The parties agree that the format in which the Preliminary Official Statement was delivered meets such electronic format requirements.

(f) Within one (1) business day after receipt of the Official Statement from the District, but by no later than the Closing Date, the Underwriters shall, at their own expense submit

the Official Statement to EMMA (as defined below). The Underwriters will comply with the provisions of MSRB Rule G-32, including without limitation the submission of Form G-32 and the Official Statement and notify the District of the date on which the Official Statement has been filed with EMMA.

“EMMA” means the MSRB’s Electronic Municipal Market Access system, or any other electronic municipal securities information access system designated by the MSRB for collecting and disseminating primary offering documents and information.

“EMMA Dataport Manual” means the document(s) designated as such published by the MSRB from time to time setting forth the processes and procedures with respect to submissions to be made to the primary market disclosure service of EMMA by underwriters under Rule G-32(b).

(g) The District hereby ratifies, confirms and approves the use and distribution by the Underwriters prior to the date hereof of the Preliminary Official Statement and hereby authorizes the Underwriters to use and distribute the Official Statement, the Resolution, and this Contract of Purchase, and all information contained in each, and all other documents, certificates and statements furnished by the District to the Underwriters in connection with the transactions contemplated by this Contract of Purchase, in connection with the offer and sale of the Bonds.

The District will covenant pursuant to a Continuing Disclosure Agreement dated as of the date of the issuance of the Bonds (the “Undertaking”), between the District and U.S. Bank Trust Company, National Association (the “Trustee”), to provide annual reports and certain notices as described in Appendix F of the Official Statement.

(h) The District acknowledges and agrees that: (i) the Underwriters are not acting as municipal advisors within the meaning of Section 15B of the Securities Exchange Act, as amended, (ii) the primary role of the Underwriters, as underwriters, is to purchase securities, for resale to investors, in an arm’s length commercial transaction between the District and the Underwriters and the Underwriters have financial and other interests that differ from those of the District; (iii) the Underwriters are acting solely as principals and are not acting as municipal advisors, financial advisors or fiduciaries to the District and have not assumed any advisory or fiduciary responsibility to the District with respect to the transaction contemplated hereby and the discussions, undertakings and procedures leading thereto (irrespective of whether the Underwriters have provided other services or are currently providing other services to the District on other matters); (iv) the only contractual obligations the Underwriters, as underwriters, have to the District with respect to the transaction contemplated hereby expressly are set forth in this Contract of Purchase; and (v) the District has consulted its own financial and/or municipal, legal, accounting, tax and other advisors, as applicable, to the extent it has deemed appropriate.

(i) At 8:00 A.M., Sacramento time, on [CLOSING DATE] or at such earlier or later time or date as shall be agreed upon by the Underwriters and the District (such time and date being herein referred to as the “Closing Date”), the District will deliver the Bonds to The Depository Trust Company, New York, New York (“DTC”), for the account of the Underwriters, duly executed by the District, and the other documents herein mentioned; and the Underwriters will (i) accept such delivery and pay the purchase price of the Bonds as set forth in paragraph (a) of this Section by wire transfer in San Francisco, California to the order of the District. Delivery

of the documents herein mentioned shall be made at the offices of Orrick, Herrington & Sutcliffe LLP, 400 Capitol Mall, Suite 3000, Sacramento, California 95814, or such other place as shall have been mutually agreed upon by the District and the Underwriters, except that the Bonds shall be delivered at the offices of DTC in New York, New York or at such other place and in such manner as shall have been mutually agreed upon by the District and the Underwriters.

The Bonds shall be issued initially in fully registered book-entry eligible form (which may be typewritten) in the form of a single registered bond for each maturity of the Bonds, shall bear CUSIP numbers and shall be registered in the name of Cede & Co., as nominee of DTC.

2. Representations, Warranties and Agreements of the District. The District hereby represents, warrants to and agrees with the Underwriters that:

(a) The District is a political subdivision of the State of California duly organized and validly existing pursuant to the Municipal Utility District Act as contained in Public Utilities Code Section 11501 *et seq.* (the “Act”) and has, and at the Closing Date will have, full legal right, power and authority (i) to enter into this Contract of Purchase, and the Undertaking, (ii) to adopt the Resolution, (iii) to pledge the Net Revenues as set forth in the Resolution, (iv) to issue, sell and deliver the Bonds to the Underwriters pursuant to the Resolution as provided herein, (v) to acquire, construct, operate, maintain, improve and finance and refinance its Electric System (as defined in the Resolution) and conduct the business thereof as set forth in and contemplated by the Preliminary Official Statement and the Official Statement, and (vi) to carry out, give effect to and consummate the transactions contemplated by this Contract of Purchase, the Undertaking, the Resolution, and the Preliminary Official Statement and the Official Statement;

(b) The District has complied, and will at the Closing Date be in compliance, in all material respects, with the Act, the Resolution, and with the obligations in connection with the issuance of the Bonds on its part contained in the Resolution, the Bonds, the Act, the Undertaking and this Contract of Purchase;

(c) The District has duly and validly adopted the Resolution, has duly authorized and approved the execution and delivery of the Bonds, this Contract of Purchase, the Undertaking and the Official Statement and has duly authorized and approved the performance by the District of its obligations contained in, and the taking of any and all action as may be necessary to carry out, give effect to and consummate the transactions contemplated by, each of said documents and, at the Closing Date, the Bonds will have been validly issued and delivered, the Resolution, the Undertaking and this Contract of Purchase will constitute the valid, legal and binding obligations of the District enforceable in accordance with their respective terms (subject to the effect of, and restrictions and limitations imposed by or resulting from, (i) bankruptcy, insolvency, debt adjustment, moratorium, reorganization or other similar laws affecting creditors’ rights, and (ii) judicial discretion) and the Resolution will be in full force and effect;

(d) The District is not in breach of or in default under any existing constitutional provision, applicable law or administrative rule or regulation of the State of California, the United States of America, or of any department, division, agency or instrumentality of either or any applicable court or administrative decree or order, or any loan agreement, bond, note, ordinance, resolution, indenture, contract, agreement or other instrument to which the District is a party or to

which the District is otherwise subject or bound which in any material way, directly or indirectly, affects the issuance of the Bonds or the validity thereof, the validity or adoption of the Resolution or the execution and delivery of the Bonds, this Contract of Purchase, the Undertaking or the other instruments contemplated by any of such documents to which the District is a party, and the adoption of the Resolution and compliance with the provisions of each will not, as of the date hereof and as of the Closing Date, conflict with or constitute a breach of or default in any material way under any existing constitutional provision, applicable law or administrative rule or regulation of the State of California, the United States, or of any department, division, agency or instrumentality of either or any applicable court or administrative judgment, decree or order, or any loan agreement, bond, note, ordinance, resolution, indenture, contract, agreement or other instrument to which the District is a party or to which the District or any of the property or assets of the Electric System (as defined in the Resolution) are otherwise subject or bound, and no event which would have a material and adverse effect upon the financial condition of the District has occurred and is continuing which constitutes or with the passage of time or the giving of notice, or both, would constitute a default or event of default by the District under any of the foregoing;

(e) All approvals, consents, authorizations, licenses and permits, elections and orders of or filings or registrations with any governmental authority, legislative body, board, agency or commission having jurisdiction which would constitute a condition precedent to, or the absence of which would materially adversely affect, the due performance by the District of its obligations in connection with the issuance of the Bonds under the Resolution, the Undertaking and this Contract of Purchase have been duly obtained or made and are in full force and effect, except for such approvals, consents and orders as may be required under the “Blue Sky” or other securities laws of any state in connection with the offering and sale of the Bonds; and, except as disclosed in the Preliminary Official Statement and the Official Statement, all authorizations, approvals, licenses, permits, consents and orders of any governmental authority, board, agency or commission having jurisdiction in the matters which are required for the due authorization of, which would constitute a condition precedent to, or the absence of which would materially adversely affect the due performance by the District of its respective obligations under, this Contract of Purchase, the Undertaking, the Bonds or the Resolution, or which are necessary to permit the District to carry out the transactions contemplated by the Preliminary Official Statement and the Official Statement to acquire, construct, operate, maintain, improve and finance the Electric System have been duly obtained or, where required for future performance, are expected to be obtained;

(f) The Bonds, when issued and delivered in accordance with the Resolution and this Contract of Purchase and paid for by the Underwriters on the Closing Date as provided herein, will be validly issued and outstanding special obligations of the District enforceable against the District in accordance with their terms and entitled to all the benefits and security of the Resolution; and, upon the issuance and delivery of the Bonds, the Resolution will provide, for the benefit of the holders from time to time of the Bonds, a legally valid and binding pledge of and lien on Net Revenues pledged under the Resolution, as provided in and contemplated by the Resolution;

(g) The Preliminary Official Statement, as of its date and as of the date hereof, did not and does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(h) At the time of the District's acceptance hereof and (unless the Official Statement is amended or supplemented pursuant to paragraph (i) of Section 2 hereof) at all times subsequent to the date of delivery thereof up to and including the Closing Date, the Official Statement will be true, correct, complete and final in all material respects and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(i) If, after the date of this Contract of Purchase and until 25 days after the end of the "underwriting period" (as defined in Rule 15c2-12), any event shall occur that might cause the Official Statement to contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, the District hereby covenants and agrees, to the extent it has knowledge of such event, to notify the Underwriters (and for the purposes of this clause to provide the Underwriters with such information as they may from time to time reasonably request), and, if in the opinion of the Underwriters and their counsel such event requires the preparation and publication of a supplement or amendment to the Official Statement, at its expense to supplement or amend the Official Statement in a form and manner approved by the Underwriters and furnish to the Underwriters a reasonable number of copies of such supplement or amendment. For purposes of this Contract of Purchase, the District may assume that the end of the "underwriting period" has occurred on the Closing Date unless the District is otherwise notified by the Underwriters on or prior to the Closing Date. If the Underwriters notify the District that the Closing Date is not the end of the "underwriting period", then the Underwriters shall further notify the District of the date that is the end of the "underwriting period" (as defined in Rule 15c2-12);

(j) If the Official Statement is supplemented or amended pursuant to paragraph (i) of Section 2 of this Contract of Purchase, at the time of each supplement or amendment thereto and (unless subsequently again supplemented or amended pursuant to such paragraph) at all times subsequent thereto during the "underwriting period", the Official Statement as so supplemented or amended will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which made, not misleading;

(k) Except as disclosed in the Preliminary Official Statement and the Official Statement, no litigation, action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, regulatory agency, public board or body, is pending or, to the knowledge of the officer of the District executing this Contract of Purchase after due investigation, threatened (i) in any way affecting the corporate existence of the District or the titles of its officers to their respective offices, (ii) affecting or seeking to prohibit, restrain or enjoin the issuance, sale or delivery of any of the Bonds, the application of the proceeds thereof in accordance with the Resolution, or the collection or application of Revenues (as defined in the Resolution) or the collection or application of the Net Revenues pledged to pay the principal of and interest on the Bonds under the Resolution or in any way contesting or affecting the validity or enforceability of any of the Bonds, the Resolution, the Undertaking, this Contract of Purchase or any action of the District contemplated by any of said documents, (iii) which may result in any material adverse change relating to the District, other than routine litigation of the type which normally accompanies its operation of its generation, transmission and distribution facilities, (iv) contesting the completeness or accuracy of the Preliminary Official Statement or the Official Statement or the

powers of the District or its authority with respect to the Bonds, the adoption of the Resolution, or the execution and delivery of the Undertaking, or this Contract of Purchase, or any action of the District contemplated by any of said documents, and (v) which would adversely affect the exclusion from gross income for federal income tax purposes of interest paid on the Bonds, nor to the knowledge of the officer of the District executing this Contract of Purchase is there any basis therefor;

(l) The District will furnish such information, execute such instruments and take such other action in cooperation with the Underwriters as the Underwriters may reasonably request (i) to qualify the Bonds for offer and sale under the “Blue Sky” or other securities laws and regulations of such states and other jurisdictions of the United States as the Senior Underwriter may designate, and (ii) to determine the eligibility of the Bonds for investment under the laws of such states and other jurisdictions and will use its best efforts to continue such qualifications in effect so long as required for the distribution of the Bonds; provided that in connection therewith the District shall not be required to execute or file a general or special consent to service of process or qualify to do business in any jurisdiction and will advise the Senior Underwriter promptly of receipt by the District of any written notification with respect to the suspension of the qualification of the Bonds for sale in any jurisdiction or written notification of the initiation or threat of any proceeding for that purpose;

(m) The audited financial statements of the District for the years ending December 31, 2023 and December 31, 2022 heretofore delivered to the Underwriters and incorporated by reference in the Preliminary Official Statement and the Official Statement as Appendix B fairly present the financial position of the District as of the dates indicated and such financial statements have been prepared in conformity with generally accepted accounting principles applied on a consistent basis;

(n) Between the date hereof and the Closing Date, the District will not, without the prior written consent of the Senior Underwriter, offer or issue any bonds, notes or other obligations for borrowed money, or incur any material liabilities, direct or contingent, nor will there be any adverse change of a material nature in the financial position, results of operations or condition, financial or otherwise, of the District, in either case other than in the ordinary course of its business or as disclosed in the Preliminary Official Statement or the Official Statement or as otherwise disclosed to the Senior Underwriter;

(o) The Bonds, the Resolution and the Undertaking conform to the descriptions thereof contained in the Preliminary Official Statement and the Official Statement;

(p) The District has the legal authority to apply and will apply, or cause to be applied, the proceeds from the sale of the Bonds as provided in and subject to all of the terms and provisions of the Resolution and as described in the Preliminary Official Statement and the Official Statement, including for payment of District expenses incurred in connection with the negotiation, marketing, issuance and delivery of the Bonds to the extent required by Section 7 (Expenses), and will not take or omit to take any action which action or omission will adversely affect the exclusion from gross income for federal income tax purposes of the interest on the Bonds;

(q) Any certificate signed by any official of the District, and delivered to the Underwriters, shall be deemed a representation and warranty by the District to the Underwriters as to the statements made therein; and

(r) Except as disclosed in the Preliminary Official Statement and the Official Statement, during the last five years the District has complied in all material respects with all previous undertakings required by Rule 15c2-12.

3. Conditions to the Obligations of the Underwriters. The obligations of the Underwriters to accept delivery of and pay for the Bonds on the Closing Date shall be subject to the performance by the District of its obligations to be performed hereunder at or prior to the Closing Date and to the fulfillment of the following conditions:

(a) The representations, warranties and covenants of the District contained herein shall be true, complete and correct on the date hereof and as of the Closing Date as if made on the Closing Date;

(b) At the Closing Date, the Resolution shall have been duly adopted and shall be in full force and effect, and shall not have been repealed, amended, modified or supplemented, except as may have been agreed to in writing by the Underwriters, and there shall have been taken in connection therewith, with the issuance of the Bonds and with the transactions contemplated thereby and by this Contract of Purchase, all such actions as, in the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel (“Bond Counsel”), shall be necessary and appropriate;

(c) At the Closing Date, the Official Statement shall not have been amended, modified or supplemented, except as may have been agreed to in writing by the Underwriters;

(d) At or prior to the Closing Date, the Underwriters shall have received copies of the following documents, in each case satisfactory in form and substance to the Underwriters:

(1) The Official Statement executed on behalf of the District by its Chief Executive Officer and General Manager, any Member of its Executive Committee, its Treasurer, its Secretary or its Chief Financial Officer (each an “Authorized Representative”);

(2) The Undertaking executed on behalf of the District by an Authorized Representative;

(3) The Sixty-Seventh Supplemental Resolution, with only such supplements or amendments thereto as may have been agreed to by the Underwriters and certified by an authorized officer of the District under its seal as having been duly adopted by the District and as being in full force and effect, and the Resolution, certified by an authorized officer of the District as being in full force and effect, with such supplements and amendments thereto adopted after the date hereof as may have been agreed to by the Underwriters;

(4) An opinion or opinions relating to the Bonds, dated the Closing Date and addressed to the District, of Bond Counsel, in substantially the form included in the

Official Statement as Appendix E, together with a letter or letters of such Bond Counsel, dated the Closing Date and addressed to the Underwriters, to the effect that the foregoing opinion or opinions addressed to the District may be relied upon by the Underwriters to the same extent as if such opinion or opinions were addressed to them;

(5) An opinion or opinions, dated the Closing Date and addressed to the Senior Underwriter, of Bond Counsel, in substantially the form attached hereto as Exhibit E;

(6) An opinion, dated the Closing Date and addressed to the Senior Underwriter, of General Counsel to the District, in substantially the form attached hereto as Exhibit C;

(7) An opinion, dated the Closing Date and addressed to the Underwriters, of Nixon Peabody LLP, as counsel for the Underwriters (“Underwriters’ Counsel”), to the effect that (i) the Bonds are exempt from the registration requirements of the Securities Act of 1933, as amended, and the Resolution is exempt from qualification under the Trust Indenture Act of 1939, as amended; (ii) the Undertaking complies as to form in all material respects with the requirements of paragraph (b)(5) of the Rule applicable to the primary offering of the Bonds; and (iii) based upon the information made available to them in the course of their participation in the preparation of the Preliminary Official Statement and the Official Statement as counsel to the Underwriters and without having undertaken to determine independently, or assuming any responsibility for, the accuracy, completeness or fairness of the statements contained in the Preliminary Official Statement and the Official Statement, they do not believe that (A) the Preliminary Official Statement, as of its date and as of the date of the Contract of Purchase, and (B) the Official Statement as of its date and as of the Closing Date, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (except for the information relating to Cede & Co., DTC or the operation of the book-entry system, the Appendices to the Official Statement, except Appendices D and F, and summaries thereof and references thereto, and other financial, accounting and statistical data included therein, as to all of which no view need be expressed); and (iii) with respect to such matters as the Underwriters may reasonably require;

(8) A certificate, dated the Closing Date, signed by an Authorized Representative of the District in substantially the form attached hereto as Exhibit D (but in lieu of or in conjunction with such certificate the Underwriters may, in its sole discretion, accept certificates or opinions of General Counsel to the District, or of other counsel acceptable to the Underwriters, that in the opinion of such counsel the issues raised in any pending or threatened litigation referred to in such certificate are without substance or that the contentions of all plaintiffs therein are without merit);

(9) [Reserved]

(10) An acceptance of and agreement to the provisions of the Sixty-Seventh Supplemental Resolution executed by the Trustee under the Resolution in form and substance acceptable to the Underwriters;

(11) A tax certificate related to the Bonds in substance and form satisfactory to Bond Counsel;

(12) Ratings of the Bonds from [S&P Global Ratings (“S&P”) of not less than “[AA (stable outlook)],” from Fitch Ratings, Inc. (“Fitch”) of not less than “[AA (stable outlook)],” and from Moody’s Investors Service Inc. (“Moody’s”) of not less than “[Aa2 (stable outlook)]”];

(13) [Reserved];

(14) An opinion of counsel to the Trustee, dated the Closing Date, addressed to the Underwriters, to the effect that (i) the Trustee is a national banking association duly organized and validly existing under the laws of the United States of America having full power and being qualified to enter into, accept and agree to the provisions of the Resolution and to enter into and perform the Undertaking , (ii) the Undertaking has been duly authorized, executed and delivered by the Trustee and, assuming due authorization, execution and delivery by the other parties thereto, constitutes the valid and binding obligation of the Trustee enforceable in accordance with its terms, subject to laws relating to bankruptcy, insolvency, moratorium, reorganization or other similar laws affecting creditors’ rights generally, to the application of equitable principals and to the exercise of judicial discretion in appropriate cases, and to enter into and perform the Undertaking, (iii) all approvals, consents and orders of any governmental authority or agency having jurisdiction in this matter that would constitute a condition precedent to the performance by the Trustee of its duties and obligations under the Resolution, and the Undertaking have been obtained and are in full force and effect, and (iv) the acceptance of the duties and obligations of the Trustee under the Resolution, and the Undertaking and the consummation of the transactions on the part of the Trustee contemplated therein, and the compliance by the Trustee, as applicable, with the terms, conditions and provisions of such document do not contravene any provisions of applicable law or regulation or any order or decree, writ or injunction or the Articles of Association or Bylaws of the Trustee, and, to the best knowledge of such counsel, will not require the consent under or result in a breach of or a default under, any resolution, agreement or other instrument to which the Trustee is a party or by which it may be bound;

(15) A copy of the Blanket Letter of Representations to DTC relating to the Bonds signed by DTC and the District; and

(16) Such additional legal opinions, certificates, instruments and other documents as the Underwriters may reasonably request to evidence the truth and accuracy and completeness, as of the date hereof and as of the Closing Date, of the District’s representations and warranties contained herein and of the statements and information contained in the Preliminary Official Statement or the Official Statement, and the due performance or satisfaction by the District at or prior to the Closing Date of all agreements

then to be performed and all conditions then to be satisfied by the District in connection with the transactions contemplated hereby and by the Resolution and the Preliminary Official Statement or the Official Statement.

If any of the conditions to the obligations of the Underwriters contained in this Section or elsewhere in this Contract of Purchase with respect to the Bonds shall not have been satisfied when and as required herein, all obligations of the Underwriters hereunder with respect to the Bonds may be terminated by the Underwriters at, or at any time prior to, the Closing Date by written notice to the District.

4. **Offering.** The obligations of the District to sell and to deliver the Bonds on the Closing Date to the Underwriters shall be subject to the following conditions:

(a) The entire \$[PAR] aggregate principal amount of the Bonds shall be purchased, accepted and paid for by the Underwriters on the Closing Date; and

(b) The District shall receive an Issue Price Certificate of the Senior Underwriter substantially in the form attached hereto as Exhibit F with respect to the Bonds.

5. **Issue Price of the Bonds.** The Senior Underwriter, on behalf of the Underwriters, agrees to assist the District in establishing the issue price of the Bonds and shall execute and deliver to the District at Closing an “issue price” or similar certificate substantially in the form attached hereto as Exhibit F, together with the supporting pricing wires or equivalent communications, with modifications to such certificate as may be deemed appropriate or necessary, in the reasonable judgment of the Senior Underwriter, the District and Bond Counsel, to accurately reflect, as applicable, the sales price or prices or the initial offering price or prices to the public of the Bonds.

(b) [Except for the maturities set forth in Schedule A of Exhibit F attached hereto,] the District will treat the first price at which 10% of each maturity of the Bonds (the “10% test”) is sold to the public as the issue price of that maturity (if different interest rates apply within a maturity, each separate CUSIP number within that maturity will be subject to the 10% test).

(c) [The Senior Underwriter confirms that the Underwriters have offered the Bonds to the public on or before the date of this Contract of Purchase at the offering price or prices (the “initial offering price”), or at the corresponding yield or yields, set forth in Schedule A of Exhibit F attached hereto. Schedule A of Exhibit F attached hereto sets forth, as of the date of this Contract of Purchase, the maturities, if any, of the Bonds for which the 10% test has not been satisfied and for which the District and the Senior Underwriter, on behalf of the Underwriters, agree that the restrictions set forth in the next sentence shall apply, which will allow the District to treat the initial offering price to the public of each such maturity as of the sale date as the issue price of that maturity (the “hold-the-offering-price rule”). So long as the hold-the-offering-price rule remains applicable to any maturity of the Bonds, the Senior Underwriter will neither offer nor sell unsold Bonds of that maturity to any person at a price that is higher than the initial offering price to the public during the period starting on the sale date and ending on the earlier of the following:

(1) the close of the fifth (5th) business day after the sale date; or

(2) the date on which the Underwriters have sold at least 10% of that maturity of the Bonds to the public at a price that is no higher than the initial offering price to the public.

The Senior Underwriter shall promptly advise the District or the District's municipal advisor when the Underwriters have sold 10% of that maturity of the Bonds to the public at a price that is no higher than the initial offering price to the public, if that occurs prior to the close of the fifth (5th) business day after the sale date.

The District acknowledges that, in making the representation set forth in this subsection, the Senior Underwriter will rely on (i) the agreement of each Underwriter to comply with the hold-the-offering-price rule, as set forth in an agreement among underwriters and the related pricing wires, (ii) in the event a selling group has been created in connection with the initial sale of the Bonds to the public, the agreement of each dealer who is a member of the selling group to comply with the hold-the-offering-price rule, as set forth in a selling group agreement and the related pricing wires, and (iii) in the event that an Underwriter is a party to a retail distribution agreement that was employed in connection with the initial sale of the Bonds to the public, the agreement of each broker-dealer that is a party to such agreement to comply with the hold-the-offering-price rule, as set forth in the retail distribution agreement and the related pricing wires. The District further acknowledges that each Underwriter shall be solely liable for its failure to comply with its agreement regarding the hold the offering price rule and that no Underwriter shall be liable for the failure of any other Underwriter, or of any dealer who is a member of a selling group, or of any broker-dealer that is a party to a retail distribution agreement to comply with its agreement regarding the hold-the-offering-price rule as applicable to the Bonds.]

(d) [The Senior Underwriter confirms that:

(1) any agreement among underwriters, any selling group agreement and each retail distribution agreement (to which the Senior Underwriter is a party) relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each Underwriter, each dealer who is a member of the selling group, and each broker-dealer that is a party to such retail distribution agreement, as applicable, to (A)(i) report the prices at which it sells to the public the unsold Bonds of each maturity allotted to it until it is notified by the Senior Underwriter that either the 10% test has been satisfied as to the Bonds of that maturity or all Bonds of that maturity have been sold to the public and (ii) comply with the hold-the-offering-price rule, if applicable, in each case if and for so long as directed by the Senior Underwriter and as set forth in the related pricing wires, (B) promptly notify the Senior Underwriter of any sales of the Bonds that, to its knowledge, are made to a purchaser who is a related party to an underwriter participating in the initial sale of the Bonds to the public (each such term being used as defined below) and (C) acknowledge that, unless otherwise advised by the Underwriter, dealer or broker-dealer, the Senior Underwriter shall assume that each order submitted by the Underwriter, dealer or broker-dealer is a sale to the public; and

(2) any agreement among underwriters relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each Underwriter that is a party to a retail distribution agreement to be employed in connection with the initial sale of the Bonds to the public to require each broker-dealer that is a party to such retail distribution agreement to (A) report the prices at which it sells to the public the unsold Bonds of each maturity allotted to it until it is notified by the Senior Underwriter or the Underwriter that either the 10% test has been satisfied as to the Bonds of that maturity or all Bonds of that maturity have been sold to the public and (B) comply with the hold-the-offering-price rule, if applicable, in each case if and for so long as directed by the Senior Underwriter or the Underwriter and as set forth in the related pricing wires.]

(e) The Underwriters acknowledge that sales of any Bonds to any person that is a related party to an Underwriter shall not constitute sales to the public for purposes of this section. Further, for purposes of this section:

(1) “public” means any person other than an underwriter or a related party,

(2) “underwriter” means (A) any person that agrees pursuant to a written contract with the District (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the public and (B) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (A) to participate in the initial sale of the Bonds to the public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the public),

(3) a purchaser of any of the Bonds is a “related party” to an underwriter if the underwriter and the purchaser are subject, directly or indirectly, to (i) more than 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (ii) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (iii) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other), and

(4) “sale date” means the date of execution of this Contract of Purchase by all parties.

6. Termination. The Underwriters shall have the right to terminate their obligations under this Contract of Purchase to purchase, accept delivery of and to pay for the Bonds, if,

(a) between the date hereof and the Closing Date, the market price or marketability, or the ability of the Underwriters to enforce contracts for the sale, at the initial offering prices set forth in the Official Statement, of the Bonds have been materially adversely affected, in the judgment of the Underwriters, (evidenced by a written notice to the District terminating the obligation of the Underwriters to accept delivery of and pay for the Bonds), by reason of any of the following:

(1) (x) any legislation which is (A) enacted by Congress, (B) favorably reported for passage to either House of the Congress of the United States by any Committee of such House to which such legislation has been referred for consideration, or (C) recommended to the Congress for passage by the President of the United States or the Treasury Department, but only, however, if the occurrence of any of the foregoing events is generally accepted by the municipal bond market as potentially affecting the federal tax status of the District, its property or income or the interest on its bonds or notes (including the Bonds), (y) any decision rendered by a court established under Article III of the Constitution of the United States or the Tax Court of the United States, or (z) a final order, ruling, regulation or official statement issued or made by or on behalf of the Treasury Department of the United States or the Internal Revenue Service with the purpose or effect, directly or indirectly, of imposing federal income taxation upon such interest as would be received by the holders of the Bonds, or upon such revenues or other income of the general character expected to be received by the District; provided, however, that the enactment of legislation which only diminishes the value of, as opposed to eliminating the exclusion from gross income for federal income tax purposes will not give the Underwriters the right to terminate their obligations hereunder;

(2) Legislation enacted (or resolution passed) by the Congress or a final order, ruling, regulation or official statement is issued or made by or on behalf of the Securities and Exchange Commission, or any other governmental agency having jurisdiction of the subject matter, to the effect that obligations of the general character of the Bonds are not exempt from registration under or other requirements of the Securities Act of 1933, as amended, or are not exempt from qualification under, or other requirements of, the Trust Indenture Act of 1939, as amended, or that the issuance, offering or sale of the Bonds or obligations of the general character of the Bonds, including any or all underlying arrangements, as contemplated hereby or by the Preliminary Official Statement or the Official Statement, otherwise is or would be in violation of the federal securities laws as amended and then in effect;

(3) Any new material outbreak or escalation of hostilities having a material effect on the financial markets of the United States or the declaration by the United States of a national emergency or war or the occurrence of any other local, national or international calamity, crisis or event relating to the effective operation of the government of or the financial community in the United States or an escalation thereof, including, without limitation, a downgrade of the sovereign debt rating of the United States by any major credit rating agency or payment default on United States Treasury obligations;

(4) the declaration of a general banking moratorium by federal, New York or California authorities, or the general suspension of trading on the New York Stock Exchange or any other national securities exchange, or any material disruption in commercial banking or securities settlement or payment services or clearing services;

(5) the imposition by the New York Stock Exchange or other national securities exchange, or any governmental authority, of any material restrictions not now in force with respect to the Bonds or obligations of the general character of the Bonds or securities generally, or the material increase of any such restrictions now in force, including those relating to the net capital requirements of, the Underwriters;

(6) the adoption of any amendment to the federal or California Constitution, decision by any federal or California court, or enactment by any federal or California legislative body materially adversely affecting (i) the District or the right of the District to receive or to pledge any of the Net Revenues, or (ii) the validity or enforceability of this Contract of Purchase, the Bonds or the Resolution;

(7) the adoption of any amendment to the California Constitution, decision by any California court, or enactment by any California legislative body adversely affecting the exemption of state or local income tax upon such interest as would be received by the holders of the Bonds, or

(8) (i) a downgrading or suspension of any rating (without regard to credit enhancement) by Moody's, S&P, or Fitch of any debt securities issued by the District, or (ii) there shall have been any official statement as to a possible downgrading (such as being placed on "credit watch" or "negative outlook" or any similar qualification) of any rating by Moody's, S&P or Fitch of any debt securities issued by the District, including the Bonds.

(b) an event occurs, or information becomes known, which, in the judgment of the Underwriters, makes untrue in any material respect any statement or information contained in the Official Statement, or has the effect that the Official Statement contains any untrue statement of material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

7. **Expenses.** (a) Except as set forth in paragraph (b) of this Section, the Underwriters shall be under no obligation to pay, and the District shall pay, or cause to be paid, all expenses incident to the performance of the District's obligations hereunder including, but not limited to, the cost of word processing and reproducing, executing and delivering the Bonds to the Underwriters; the cost of preparation, printing (and/or word processing and reproducing), distribution and delivery of the Resolution; the cost of printing and distributing copies of the Preliminary Official Statement and the Official Statement in sufficient quantities for distribution in connection with the sale of the Bonds (including resales in the secondary market); the fees and disbursements of Bond Counsel; the fees and disbursements of PFM Financial Advisors LLC, for its services as Municipal Advisor to the District; the fees and disbursements of any other engineers,

accountants, and any other experts or consultants retained in connection with the issuance of the Bonds; the fees and disbursements of the Trustee; fees charged by the rating agencies for rating the Bonds; any advertising expenses; filing fees; CUSIP charges; or fees and expenses of any credit enhancement; expenses incurred by the Underwriters on behalf of the District relating to food, transportation or lodging for District staff members attending the bond pricing are to be reimbursed by the District through proceeds of the Bonds or available funds of the District (the District's obligations in regard to these expenses survive if delivery of the Bonds fails due to one of the conditions set forth in Section 3 hereof or this Contract of Purchase is terminated pursuant to Section 6 hereof) and any other expenses not specifically enumerated in paragraph (b) of this Section incurred in connection with the issuance of the Bonds.

(b) The District shall be under no obligation to pay, and the Underwriters shall pay (from the expense component of the underwriting discount), the cost of preparation of the Agreement Among Underwriters and the letter of instructions relating thereto and this Contract of Purchase; the cost of wiring funds for the payment of the purchase price of the Bonds; the fees and expenses of DTC incurred with respect to depositing the Bonds therewith; expenses to qualify the Bonds for sale under any "Blue Sky" laws; fees to the California Debt and Investment Advisory Commission; and all other expenses incurred by the Underwriters in connection with its public offering and distribution of the Bonds not specifically enumerated in paragraph (a) of this Section, including the fees and disbursements of Underwriters' Counsel. Notwithstanding that the fees to the California Debt and Investment Advisory Commission are solely the legal obligation of the Underwriters, the District agrees to reimburse the Underwriters for such fees.

8. **Notices.** Any notice or other communication to be given to the District under this Contract of Purchase may be given by delivering the same in writing to Sacramento Municipal Utility District, at 6201 S Street, Sacramento, California 95817-1899; and any notice or other communication to be given to the Underwriters under this Contract of Purchase may be given by delivering the same in writing to J.P. Morgan Securities LLC, [____], Attention: [____].

9. **Parties in Interest.** This Contract of Purchase is made solely for the benefit of the District and the Underwriters (including successors or assigns of any Underwriter) and no other person shall acquire or have any right hereunder or by virtue hereof. The term "successors and assigns" as used in this Section shall not include any purchaser of the Bonds, as such purchaser, from any of the several Underwriters.

10. **Survival of Representations and Warranties.** The representations and warranties of the District, set forth in or made pursuant to this Contract of Purchase, shall not be deemed to have been discharged, satisfied or otherwise rendered void by reason of the closing or termination of this Contract of Purchase and regardless of any investigations or statements as to the results thereof made by or on behalf of the Underwriters and regardless of delivery of and payment for the Bonds.

11. **Counterparts.** This Contract of Purchase may be executed in several counterparts, which together shall constitute one and the same instrument.

12. California Law Governs; Venue. The validity, interpretation and performance of this Contract of Purchase shall be governed by the laws of the State of California. Any action or proceeding to enforce or interpret this Contract of Purchase shall be brought, commenced or prosecuted in the County of Sacramento, California.

[remainder of page intentionally left blank]

13. **Entire Agreement.** This Contract of Purchase when accepted by you in writing as heretofore specified shall constitute the entire agreement between us.

14. **Effectiveness.** This Contract of Purchase shall become effective and binding upon the respective parties hereto upon the execution of the acceptance hereof by an authorized officer of the District and shall be valid and enforceable as of the time of such acceptance.

Very truly yours,

J.P. MORGAN SECURITIES LLC,
BOFA SECURITIES, INC.,
BARCLAYS CAPITAL INC.,
GOLDMAN SACHS & CO. LLC,
MORGAN STANLEY & CO. LLC, and
WELLS FARGO BANK, NATIONAL
ASSOCIATION

BY: J.P. MORGAN SECURITIES LLC, as Senior
Underwriter

[Name]
[Title]

Accepted: [SALE DATE]

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Russell Mills
Treasurer

[Signature page to Series M Bonds Contract of Purchase]

Exhibit A

SACRAMENTO MUNICIPAL UTILITY DISTRICT

\$[PAR] Electric Revenue Bonds, 2024 Series M

<u>Maturity</u> <u>([_____])</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Yield</u>	<u>Price</u>	<u>General</u> <u>Rule</u> <u>Maturities</u>	<u>Hold the</u> <u>Offering</u> <u>Price Rule</u> <u>Maturities</u>
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Optional Redemption. On any date on or after [_____] , 20__ , the Bonds maturing on and after [_____] , 20__ are subject to redemption prior to their stated maturities at the option of the District, from any source of available funds, as a whole or in part, by lot, at the principal amount thereof, without premium, together with accrued interest to the date fixed for redemption.

Mandatory Redemption. The Bonds maturing on [_____] , 20__ , are subject to mandatory redemption prior to maturity, in part, by lot, from sinking fund payments required for the Bonds by the Sixty-Seventh Supplemental Resolution at the principal amount thereof together with the accrued interest thereon to the date fixed for redemption, without premium, as shown below:

Sinking Fund Payment Dates ([])	Principal Amount
	\$

†

† Maturity.

Selection of Bonds for Redemption. If less than all of a maturity of the Bonds is to be redeemed, the Trustee shall select the Bonds of such maturity to be redeemed, from the Outstanding Bonds of such maturity not previously called for redemption, by lot in any manner the Trustee deems fair. For so long as the book-entry only system is in effect with respect to the Bonds, DTC shall select the Bonds to be redeemed in accordance with the procedures of DTC.

Notice of Redemption. Notice of redemption for the Bonds will be given by publication at least once in financial newspapers or journals, selected by the Trustee, of general circulation in San Francisco, California, Chicago, Illinois, and New York, New York, each such publication to be not less than 20 nor more than 60 days before the date fixed for redemption, if at any time the Bonds are not in book entry form. Notice also will be mailed to the registered owners of any Bonds designated for redemption, but failure to mail such notice or any defect therein with respect to any particular Bond will not affect the validity of the proceedings for the redemption of any other Bonds. For so long as the book-entry-only system is in effect with respect to the Bonds, the Trustee will mail notice of redemption solely to DTC or its nominee or its successor. Any failure of DTC or its successor, or of a direct or indirect DTC participant, to notify a beneficial owner of a Bond of any redemption will not affect the sufficiency or validity of the redemption of any Bond. The District may instruct the Trustee to give conditional notice of optional redemption, which may be conditioned upon the receipt of moneys or any other event.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

**Exhibit B to the Contract of Purchase
(Official Statement)**

SACRAMENTO MUNICIPAL UTILITY DISTRICT

**Exhibit C to the Contract of Purchase
(Opinion of General Counsel to the
Sacramento Municipal Utility District)**

[CLOSING DATE]

[TO BE UPDATED]

J.P. Morgan Securities LLC

[
]

Re: Sacramento Municipal Utility District
§[PAR] Electric Revenue Bonds, 2024 Series M

Ladies and Gentlemen:

This opinion is being delivered pursuant to Paragraph 3(d)(6) of the Contract of Purchase (the “Contract of Purchase”), dated [SALE DATE], between J.P. Morgan Securities LLC, as Senior Managing Underwriter named therein (the “Senior Underwriter”), and the Sacramento Municipal Utility District (the “District”) relating to the above-captioned bonds (the “Bonds”).

As counsel to the District, I have reviewed (i) Resolution No. 6649 of the District, adopted on January 7, 1971, as amended and supplemented to date, including as amended and supplemented by Resolution No. [RESO NO.], adopted on March 21, 2024 (as so amended and supplemented, the “Resolution”); (ii) the Continuing Disclosure Agreement, dated the date hereof (the “Undertaking”), between the District and U.S. Bank Trust Company, National Association, as trustee (in such capacity, the “Trustee”); (iii) the Preliminary Official Statement of the District, dated [POS DATE] (the “Preliminary Official Statement”); (iv) the Official Statement of the District, dated [SALE DATE] (the “Official Statement”) and (v) such other documents, opinions and matters to the extent I deemed necessary to provide the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. I have assumed the genuineness of all documents and signatures presented to me (whether as originals or as copies) and the due and legal execution and delivery by, and validity against, any parties other than the District. I have not undertaken to verify independently, and have assumed, the accuracy of the factual matters represented, warranted or certified in the documents referred to in the second paragraph hereof. I have further assumed compliance with all covenants and agreements contained in such documents.

I call attention to the fact that the rights and obligations under the Resolution, the Undertaking, and the Contract of Purchase may be subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or

affecting creditors' rights, to the application of equitable principles, and to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against municipal utility districts in the State of California. I express no opinion with respect to any indemnification, contribution, choice of law, choice of forum or waiver provisions contained therein.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, I am of the opinion that:

1. The District is a political subdivision of the State of California duly organized and validly existing under the Act, as amended, and has full legal right, power and authority to execute and deliver (or adopt, as the case may be), and to perform its obligations under, the Resolution, the Undertaking and the Contract of Purchase.

2. The Contract of Purchase and the Undertaking have been duly authorized, executed and delivered by the District, and, assuming due authorization, execution and delivery by each of the parties thereto other than the District, constitute the legal, valid and binding obligations of the District, enforceable against the District in accordance with their respective terms.

3. The District is not in breach of or default under any existing constitutional provision, applicable law or administrative regulation of the State of California or the United States or any applicable judgment or decree or any loan agreement, indenture, bond, note, resolution, agreement or other instrument known to me after reasonable inquiry to which the District is a party or to which the District or any of its property or assets is otherwise subject which would have a material adverse effect on the financial condition or operations of the District, and no event has occurred and is continuing which with the passage of time or the giving of notice, or both, would constitute a default or event of default under any such instrument which would have a material adverse effect on the financial condition or operations of the District; and the execution and delivery of the Bonds, the Undertaking and the Contract of Purchase and the adoption of the Resolution, and compliance with any existing constitutional provision, law, administrative regulation, judgment, decree, loan agreement, indenture, bond, note, resolution, agreement or other instrument known to me after reasonable inquiry to which the District is a party or to which the District or any of its property or assets is otherwise subject will not, as of the date hereof, conflict with or constitute a breach of or default under any such instrument which would have a material adverse effect on the financial condition or operations of the District, nor will any such execution, delivery, adoption or compliance result in the creation or imposition of any lien, charge or other security interest or encumbrance of any nature whatsoever upon any of the property or assets of the District or under the terms of any such law, regulation or instrument, except as expressly provided by the Bonds and the Resolution.

4. The statements contained in the Preliminary Official Statement and the Official Statement which purport to describe certain provisions of the Bonds, the Undertaking, and the Resolution present a fair and accurate summary of such provisions for the purpose of use in the Preliminary Official Statement and the Official Statement.

5. Except as described or referred to in the Preliminary Official Statement and the Official Statement, as of the date hereof, there is no action, suit, proceeding, inquiry or

investigation, at law or in equity, before or by any court, government agency, public board or body, pending or, to the best of my knowledge, threatened against the District affecting the corporate existence of the District or the titles of its officers to their respective offices, or affecting or seeking to prohibit, restrain or enjoin the sale, issuance or delivery of the Bonds or the collection of the Revenues (as defined in the Resolution) or the Net Revenues (as defined in the Resolution) pledged or to be pledged to pay the principal of and interest on the Bonds or contesting or affecting as to the District the validity or enforceability of the Act, the Bonds, the Resolution, the Contract of Purchase or the Undertaking, or contesting the tax exempt status of interest on the Bonds, or which may result in any material adverse change relating to the District, other than routine litigation of the type which normally accompanies its operation of its generation, transmission and distribution facilities, or contesting the completeness or accuracy of the Preliminary Official Statement or the Official Statement or any supplement or amendment thereto, or contesting the powers of the District or any authority for the issuance of the Bonds, the adoption of the Resolution, or the execution and delivery by the District of the Contract of Purchase, or the Undertaking, nor, to the best of my knowledge, is there any basis for any such action, suit, proceeding, inquiry or investigation wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Act or the authorization, execution, delivery or performance by the District of the Bonds, the Resolution, the Undertaking, or the Contract of Purchase.

6. Based upon my review of the Preliminary Official Statement and the Official Statement as General Counsel to the District and without having undertaken to determine independently the accuracy, completeness or fairness of the statements contained in the Preliminary Official Statement and the Official Statement (except as specifically set forth in paragraph 4 hereof), I have no reason to believe that the statements contained in the Preliminary Official Statement (except for information relating Cede & Co., DTC or the operation of the book-entry system, the Appendices (except Appendix A) to the Preliminary Official Statement, and other financial and statistical data included therein, as to all of which I express no view) as of its date and as of the date of the Contract of Purchase contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading and the Official Statement (except for information relating Cede & Co., DTC or the operation of the book-entry system, the Appendices (except Appendix A) to the Official Statement, and other financial and statistical data included therein, as to all of which I express no view) (A) as of the date of the Official Statement contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading or (B) as of the date hereof contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

For purposes of the opinions expressed herein, I have assumed that an agreement or other document is “material” to the District if it involves amounts in excess of \$10,000,000 and that a matter would result in a “material adverse change” to the District if the financial consequences involved would exceed \$10,000,000.

I understand that you are relying upon the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel, with respect to the validity of the Bonds and the exclusion of interest on the

Bonds from gross income for federal income tax purposes and the Bonds for purposes of State of California income taxation and, accordingly, render no opinion with respect thereto.

Very truly yours,

SACRAMENTO MUNICIPAL UTILITY DISTRICT

Exhibit D to the Contract of Purchase

CERTIFICATE

The Sacramento Municipal Utility District (the “District”), hereby certifies that:

(1) The representations and warranties of the District (excluding those representations and warranties contained in Section 2(e) and Section 2(k) of the hereinafter defined Contract of Purchase) contained in the Contract of Purchase, dated [SALE DATE], between the District and the Underwriters named therein (the “Contract of Purchase”) with respect to the sale by the District of \$[PAR] aggregate principal amount of its Electric Revenue Bonds, 2024 Series M (the “Bonds”), are true and correct on and as of the Closing Date as if made on the Closing Date.

(2) All approvals, consents, authorizations, licenses and permits, elections and orders of or filings or registrations with any governmental authority, legislative body, board, agency or commission having jurisdiction which would constitute a condition precedent to, or the absence of which would materially adversely affect, the due performance by the District of its obligations in connection with the issuance of the Bonds under the Resolution, the Undertaking, and the Contract of Purchase have been duly obtained or made and are in full force and effect, except for such approvals, consents and orders as may be required under the “Blue Sky” or other securities laws of any state in connection with the offering and sale of the Bonds; and, except as disclosed in the Preliminary Official Statement and the Official Statement, all authorizations, approvals, licenses, permits, consents and orders of any governmental authority, board, agency or commission having jurisdiction in the matters which are required for the due authorization of, which would constitute a condition precedent to, or the absence of which would materially adversely affect the due performance by the District of its respective obligations under, the Contract of Purchase, the Undertaking, the Bonds or the Resolution, or which are necessary to permit the District to carry out the transactions contemplated by the Preliminary Official Statement and the Official Statement to acquire, construct, operate, maintain, improve and finance the Electric System have been duly obtained or, where required for future performance, are expected to be obtained.

(3) Except as disclosed in the Preliminary Official Statement and the Official Statement, no litigation, action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, regulatory agency, public board or body, is pending or, to the best of knowledge of the officer of the District executing this Contract of Purchase after due investigation, threatened against the District, in any way affecting the corporate existence of the District or the titles of its officers to their respective offices, or affecting or seeking to prohibit, restrain or enjoin the sale, issuance or delivery of any of the Bonds or the collection of the Revenues (as defined in the Resolution) or the Net Revenues (as defined in the Resolution) pledged or to be pledged to pay the principal of and interest on the Bonds, or in any way contesting or affecting as to the District the validity or enforceability of the Act, the Bonds, the Resolution, the

Contract of Purchase, the Undertaking, or any action of the District contemplated by any of said documents, or contesting the tax exempt status of interest on the Bonds, or which may result in any material adverse change relating to the District, other than routine litigation of the type which normally accompanies its operation of its generation, transmission and distribution system, or contesting the completeness or accuracy of the Preliminary Official Statement or the Official Statement or any supplement or amendment thereto, or contesting the powers of the District or any authority for the issuance of the Bonds, the adoption of the Resolution, or the execution and delivery by the District of the Contract of Purchase or the Undertaking, nor, to the best of my knowledge, is there any basis for any such action, suit, proceeding, inquiry or investigation wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Act of the authorization, execution, delivery or performance by the District of the Bonds, the Resolution, the Undertaking, or the Contract of Purchase, or any action of the District contemplated by any of said documents, or which would adversely affect the exclusion from gross income for federal income tax purposes of interest paid on the Bonds, nor to the knowledge of the officer of the District executing this Contract of Purchase is there any basis therefor.

(4) No event affecting the District has occurred (with respect to the Preliminary Official Statement, from its date to the date of the Contract of Purchase, and with respect to the Official Statement, since the date of the Official Statement) which should have been or should be disclosed in the Preliminary Official Statement or the Official Statement so that the Preliminary Official Statement or the Official Statement did not and does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, and which has not been disclosed in a supplement or amendment to the Preliminary Official Statement or the Official Statement.

(5) The District has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the date hereof pursuant to the Contract of Purchase with respect to the issuance of the Bonds.

(6) All capitalized terms employed herein which are not otherwise defined shall have the same meanings as in the Contract of Purchase.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Name:
Title:

Dated: [CLOSING DATE]

**Exhibit E to the Contract of Purchase
(Supplemental Opinion of Bond Counsel)**

[CLOSING DATE]

[TO BE UPDATED]

J.P. Morgan Securities LLC

[
]

Sacramento Municipal Utility District
Electric Revenue Bonds, 2024 Series M
(Supplemental Opinion)

Ladies and Gentlemen:

This letter is addressed to you, as Senior Underwriter, pursuant to Section 3(d)(5) of the Contract of Purchase, dated [SALE DATE] (the “Purchase Contract”), between you and the other underwriters named therein and the Sacramento Municipal Utility District (the “District”), providing for the purchase of \$[PAR] aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Bonds, 2024 Series M (the “2024 Series M Bonds”). The 2024 Series M Bonds are being issued pursuant to Resolution No. 6649 of the Board of Directors of the District, adopted January 7, 1971, as supplemented and amended by later resolutions of said Board of Directors (as so supplemented and amended, the “Resolution”), including Resolution No. [RESO NO.], adopted on March 21, 2024. Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Resolution or, if not defined in the Resolution, in the Purchase Contract.

In connection with our role as bond counsel to the District, we have reviewed the Purchase Contract; the Resolution; the Tax Certificate, dated the date hereof (the “Tax Certificate”), executed by the District; certain portions of the posted preliminary official statement of the District, dated [POS DATE] with respect to the 2024 Series M Bonds (the “Preliminary Official Statement”) and of the posted official statement of the District, dated [SALE DATE], with respect to the 2024 Series M Bonds (the “Official Statement”); opinions of counsel to the District and the Trustee; certificates of the District, the Trustee and others; and such other documents, opinions and matters to the extent we deemed necessary to render the opinions and conclusions set forth herein.

The opinions and conclusions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions or conclusions may be affected by actions taken or omitted or events occurring after the original delivery of the 2024 Series M Bonds on the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after the original delivery of the 2024 Series M Bonds on the date hereof. We have assumed the genuineness of all documents and signatures provided to us and the due and legal execution and delivery thereof by, and validity against, any parties other than the District. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. We have further assumed compliance with all covenants and agreements contained in such documents. In addition, we call attention to the fact that the rights and obligations under the 2024 Series M Bonds, the Resolution, the Tax Certificate and the Purchase Contract and their enforceability may be subject to bankruptcy, insolvency, reorganization, receivership, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against governmental entities such as the District in the State of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute or to have the effect of a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinions with respect to the state or quality of title to or interest in any assets described in or as subject to the lien of the Resolution or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such assets. Finally, we undertake no responsibility for the accuracy, except as expressly set forth in numbered paragraph 3 below, completeness or fairness of the Official Statement or other offering material relating to the 2024 Series M Bonds and express no opinion or view with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions and conclusions:

1. The 2024 Series M Bonds are not subject to the registration requirements of the Securities Act of 1933, as amended, and the Resolution is exempt from qualification pursuant to the Trust Indenture Act of 1939, as amended.
2. The Purchase Contract has been duly executed and delivered by, and constitutes a valid and binding obligation of, the District.
3. The statements contained in the Official Statement under the captions "THE 2024 SERIES M BONDS" (excluding information relating to book-entry or The Depository Trust Company), "SECURITY FOR THE BONDS" and "TAX MATTERS" and in APPENDIX D – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION" excluding any material that may be treated as included under such captions by cross-reference or reference to other documents or sources, insofar as such statements expressly summarize certain provisions of the Resolution or set out the content of our final legal opinion as bond counsel to the

District concerning the validity of the 2024 Series M Bonds and certain other matters, dated the date hereof and addressed to the District, are accurate in all material respects.

4. We are not passing upon and do not assume any responsibility for the accuracy, completeness or fairness of any of the statements contained in the Preliminary Official Statement or (except as explicitly stated in paragraph 3 above) in the Official Statement and make no representation that we have independently verified the accuracy, completeness or fairness of any such statements. In our capacity as bond counsel to the District in connection with issuance of the 2024 Series M Bonds, we participated in conferences with your representatives, your counsel, representatives of the District, its counsel, accountants, and others, during which the contents of the Preliminary Official Statement or the Official Statement and related matters were discussed. Based on our participation in the above-mentioned conferences (which, with respect to the Preliminary Official Statement, did not extend beyond the date of the Purchase Contract), and in reliance thereon, on oral and written statements and representations of the District and others and on the records, documents, certificates, opinions and matters herein mentioned, subject to the limitations on our role as bond counsel to the District, we advise you as a matter of fact and not opinion that (a) no facts had come to the attention of the attorneys in our firm rendering legal services with respect to the Preliminary Official Statement which caused us to believe as of the date of the Purchase Contract, based on the documents, drafts and facts in existence and reviewed as of that date, that the Preliminary Official Statement contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (except any information marked as preliminary or subject to change, any information permitted to be omitted by Securities and Exchange Commission Rule 15c2-12 or otherwise left blank and any other differences with the information in the Official Statement), and (b) no facts had come to the attention of the attorneys in our firm rendering legal services with respect to the Official Statement which caused us to believe as of the date of the Official Statement and as of the date hereof that the Official Statement contained or contains any untrue statement of a material fact or omitted or omits to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that, we expressly exclude from the scope of this paragraph and express no view, with respect to both the Preliminary Official Statement and the Official Statement, about any CUSIP numbers, financial, accounting, statistical or economic, engineering or demographic data or forecasts, numbers, charts, tables, graphs, estimates, projections, assumptions or expressions of opinion, any statements about compliance with prior continuing disclosure undertakings, any management discussion and analysis, any information about Cede & Co., The Depository Trust Company or book-entry, ratings, rating agencies, municipal advisors, underwriters, underwriting, the designation of the 2024 Series M Bonds as Green Bonds – Climate Bond Certified, and the information contained in Appendices B, C and G included or referred to therein or omitted therefrom. No responsibility is undertaken or conclusion expressed with respect to any other disclosure document, materials or activity, or as to any information from another document or source referred to by or incorporated by reference in the Preliminary Official Statement or the Official Statement.

This letter is furnished by us as bond counsel to the District. No attorney-client relationship has existed or exists between our firm and you in connection with the 2024 Series M Bonds or by virtue of this letter. We disclaim any obligation to update this letter. This letter is delivered to

you as Senior Underwriter of the 2024 Series M Bonds, is solely for your benefit as such Senior Underwriter in connection with the original delivery of the 2024 Series M Bonds on the date hereof, and is not to be used, circulated, quoted or otherwise referred to or relied upon for any other purpose or by any other person. This letter is not intended to, and may not, be relied upon by owners of 2024 Series M Bonds or by any other party to whom it is not specifically addressed.

Very truly yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

Exhibit F to the Contract of Purchase

(Form of Issue Price Certificate Of The Senior Underwriter Regarding Offering Prices)

SACRAMENTO MUNICIPAL UTILITY DISTRICT

\$[PAR] Electric Revenue Bonds, 2024 Series M

The undersigned, on behalf of J.P. Morgan Securities LLC, as representative (the “Representative”) of itself, BofA Securities Inc., Barclays Capital Inc., Goldman Sachs & Co. LLC, Morgan Stanley & Co. LLC, and Wells Fargo Bank, National Association (together, the “Underwriting Group”), hereby certifies, on its own behalf and on behalf of the other members of the Underwriting Group on the basis of representations and warranties set forth in the agreement among underwriters, as set forth below with respect to the sale and issuance of the above-captioned obligations (the “Bonds”).

1. ***Sale of the [General Rule Maturities][Bonds].*** As of the date of this Certificate, for each Maturity of the [General Rule Maturities][Bonds], the first price at which at least 10% of such Maturity was sold to the Public is the respective price listed in Schedule A.

2. ***[Initial Offering Price of the Hold-the-Offering-Price-Maturities.***

(a) The Underwriting Group offered the Hold-the-Offering-Price Maturities to the Public for purchase at the respective initial offering prices listed in Schedule A (the “Initial Offering Prices”) on or before the Sale Date. A copy of the pricing wire or equivalent communication for the Bonds is attached to this Certificate as Schedule B.

(b) As set forth in the Bond Purchase Agreement for the Bonds, the Representative has agreed in writing that for each Maturity of the Hold-the-Offering-Price Maturities, it would neither offer nor sell any of the unsold Bonds of such Maturity to any person at a price that is higher than the Initial Offering Price for such Maturity during the Holding Period for such Maturity (the “hold-the-offering-price rule”). Pursuant to such agreement, the Representative has not offered or sold any unsold Bonds of any Maturity of the Hold-the-Offering-Price Maturities at a price that is higher than the respective Initial Offering Price for that Maturity of the Bonds during the Holding Period.]

3. ***Defined Terms.***

(a) *[General Rule Maturities* means those Maturities of the Bonds listed in Schedule A hereto as the “General Rule Maturities.”]

(b) *[Hold-the-Offering-Price Maturities* means those Maturities of the Bonds listed in Schedule A hereto as the “Hold-the-Offering-Price Maturities.”]

(c) *[Holding Period* means, with respect to a Hold-the-Offering-Price Maturity, the period starting on the Sale Date and ending on the earlier of (i) the close of the fifth business day after the Sale Date, or (ii) the date on which the Underwriters have sold at least 10% of such Hold-

the-Offering-Price Maturity to the Public at prices that are no higher than the Initial Offering Price for such Hold-the-Offering-Price Maturity.]

(d) *Issuer* means Sacramento Municipal Utility District.

(e) *Maturity* means Bonds with the same credit and payment terms. Bonds with different maturity dates, or Bonds with the same maturity date but different stated interest rates, are treated as separate maturities.

(f) *Public* means any person (including an individual, trust, estate, partnership, association, company, or corporation) other than an Underwriter or a Related Party (as such terms are defined below) to an Underwriter.

(g) A purchaser of any of the Bonds is a *Related Party* to any Underwriter if the Underwriter and the purchaser are subject, directly or indirectly, to (i) at least 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (ii) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (iii) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other).

(h) *Sale Date* means the first day on which there is a binding contract in writing for the sale of a Maturity of the Bonds. The Sale Date of the Bonds is [SALE DATE].

(i) *Underwriter* means (i) any person that agrees pursuant to a written contract with the Issuer (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the Public, and (ii) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (i) of this paragraph to participate in the initial sale of the Bonds to the Public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the Public).

The representations set forth in this certificate are limited to factual matters only, and as it relates to the actions of the other Underwriters, such representations are made to the best of the Representative's knowledge based on the Representative's records. Nothing in this certificate represents the Representative's interpretation of any laws, including specifically Sections 103 and 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations thereunder. The undersigned understands that the foregoing information will be relied upon by the Issuer with respect to certain of the representations set forth in the Tax Certificate and with respect to compliance with the federal income tax rules affecting the Bonds, and by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Issuer, in connection with rendering its opinion that the interest on the Bonds is excluded from gross income for federal income tax purposes, the preparation of the Internal Revenue Service Form 8038-G, and other federal income tax advice that it may give to the Issuer from time to time relating to the Bonds.

Dated: [CLOSING DATE]

J.P. Morgan Securities LLC,
as representative of the Underwriting Group

By: _____

Name: _____

Schedule A

Sale Prices

[\$PAR] Electric Revenue Bonds, 2024 Series M

<u>Maturity</u> <u>(_____)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Yield</u>	<u>Price</u>	<u>General</u> <u>Rule</u> <u>Maturities</u>	<u>Hold the</u> <u>Offering</u> <u>Price Rule</u> <u>Maturities</u>
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Schedule B

Pricing Wire or Equivalent Communication

Not applicable, because there are no Hold-the-Offering-Price Maturities

Attached

DRAFT CONTRACT OF PURCHASE

[2024 SERIES N]

SACRAMENTO MUNICIPAL UTILITY DISTRICT
[\$[PAR] Electric Revenue Refunding Bonds, 2024 Series N

CONTRACT OF PURCHASE

[SALE DATE]

Honorable Board of Directors
Sacramento Municipal Utility District
6201 S Street
Sacramento, California 95817-1899

Dear Directors:

The undersigned BofA Securities, Inc., Barclays Capital Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities, Inc., Morgan Stanley & Co. LLC, and Wells Fargo Bank, National Association (herein collectively referred to as the “Underwriters”), acting for and on behalf of themselves, offer to enter into this Contract of Purchase (the “Contract of Purchase”) with the Sacramento Municipal Utility District (the “District”) which, upon the District’s acceptance, will be binding upon the District and upon the Underwriters. BofA Securities, Inc. has been duly authorized to execute this Contract of Purchase and to act hereunder by and based on representations made to it under an Agreement Among Underwriters dated [_____] on behalf of the Underwriters as the Senior Managing Underwriter (the “Senior Underwriter”). This offer is made subject to the District’s acceptance on or before 5:00 p.m., Sacramento time, on the date hereof, and if not so accepted, will be subject to withdrawal by the Underwriters upon notice delivered to the District at any time prior to the acceptance hereof by the District.

1. Purchase, Sale and Delivery of the Bonds. Subject to the terms and conditions and in reliance upon the representations, warranties and agreements herein set forth, the Underwriters, jointly and severally, hereby agree to purchase from the District, and the District hereby agrees to sell to the Underwriters, all (but not less than all) of the \$[PAR] aggregate principal amount of the Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2024 Series N (the “Bonds”), dated [CLOSING DATE], bearing interest as set forth in the Official Statement (as hereinafter defined) of the District relating to the Bonds in each year until maturity or earlier redemption at the rates and maturing on the dates and in the amounts set forth in the Official Statement. The purchase price for the Bonds shall be \$[PURCHASE PRICE] (consisting

of the principal amount of the Bonds of \$[PAR] plus/minus [net] original issue premium/discount of \$[] and minus an Underwriters' discount of \$[]).

(b) The Bonds shall be substantially in the form described in, shall be issued and secured under the provisions of, and shall be payable as provided in, Resolution No. 6649, adopted by the Board of Directors of the District on January 7, 1971 (the "Master Resolution"), as heretofore amended and supplemented, including the amendments and supplements thereto made by Resolution No. [RESO NO.], adopted by the Board of Directors on March 21, 2024 (the "Sixty-Seventh Supplemental Resolution"). The Master Resolution, as supplemented and amended as described in this Contract of Purchase, is herein called the "Resolution." The Bonds are authorized to be issued pursuant to applicable California law, including the Municipal Utility District Act (Sections 12850 to 12860 of the Public Utilities Code), the Revenue Bond Law of 1941 (Government Code Section 54300 *et seq.*), Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (Section 53580 *et seq.*) and the Resolution. The Bonds will be special obligations of the District payable exclusively from, and are secured by a pledge (effected in the manner and to the extent provided in the Resolution) of, the Net Revenues (as defined in the Resolution). The Bonds shall be payable and shall be subject to redemption as provided in the Resolution.

(c) The Bonds are being issued to [(i)] refund the Refunded Bonds (as defined in the Official Statement)[, and (ii) pay certain costs associated with the issuance of the Bonds]. A portion of the proceeds of the Bonds[, together with other available funds,] will be deposited in an escrow fund established pursuant to an escrow agreement (the "Escrow Agreement") between the District and the Trustee, in its capacity as Escrow Agent (in such capacity, the "Escrow Agent").

(d) The District has heretofore delivered to the Underwriters copies of the Preliminary Official Statement dated [POS DATE] relating to the Bonds (the "Preliminary Official Statement") in connection with the public offering of the Bonds. The Preliminary Official Statement was deemed final by the District as of the date thereof in accordance with paragraph (b)(1) of Rule 15c2-12 of the Securities and Exchange Commission ("Rule 15c2-12"), except for the information not required to be included therein under Rule 15c2-12.

(e) The District shall prepare and deliver to the Underwriters, as promptly as practicable, but in any event not later than two business days prior to the Closing Date (as defined below) or seven business days from the date hereof, a final official statement, with such changes and amendments as may be agreed to by the Underwriters, in such quantities as the Underwriters may reasonably request in order to comply with paragraph (b)(4) of Rule 15c2-12 and the rules of the Municipal Securities Rulemaking Board ("MSRB") (such official statement, including the cover page and Appendices thereto, as the same may be supplemented or amended pursuant to paragraph (i) of Section 2 hereof, is herein referred to as the "Official Statement"). In addition, the District will provide, subject to customary disclaimers regarding the transmission of electronic copies, an electronic copy of the final Official Statement to the Underwriters in the currently required designated electronic format stated in MSRB Rule G-32 and the EMMA Dataport Manual (as defined below). The parties agree that the format in which the Preliminary Official Statement was delivered meets such electronic format requirements.

(f) Within one (1) business day after receipt of the Official Statement from the District, but by no later than the Closing Date, the Underwriters shall, at their own expense submit the Official Statement to EMMA (as defined below). The Underwriters will comply with the provisions of MSRB Rule G-32, including without limitation the submission of Form G-32 and the Official Statement and notify the District of the date on which the Official Statement has been filed with EMMA.

“EMMA” means the MSRB’s Electronic Municipal Market Access system, or any other electronic municipal securities information access system designated by the MSRB for collecting and disseminating primary offering documents and information.

“EMMA Dataport Manual” means the document(s) designated as such published by the MSRB from time to time setting forth the processes and procedures with respect to submissions to be made to the primary market disclosure service of EMMA by underwriters under Rule G-32(b).

(g) The District hereby ratifies, confirms and approves the use and distribution by the Underwriters prior to the date hereof of the Preliminary Official Statement and hereby authorizes the Underwriters to use and distribute the Official Statement, the Resolution, and this Contract of Purchase, and all information contained in each, and all other documents, certificates and statements furnished by the District to the Underwriters in connection with the transactions contemplated by this Contract of Purchase, in connection with the offer and sale of the Bonds.

The District will covenant pursuant to a Continuing Disclosure Agreement dated as of the date of the issuance of the Bonds (the “Undertaking”), between the District and U.S. Bank Trust Company, National Association (the “Trustee”), to provide annual reports and certain notices as described in Appendix F of the Official Statement.

(h) The District agrees and acknowledges that: (i) the Underwriters are not acting as municipal advisors within the meaning of Section 15B of the Securities Exchange Act, as amended, (ii) the primary role of the Underwriters, as underwriters, is to purchase securities, for resale to investors, in an arm’s length commercial transaction between the District and the Underwriters and the Underwriters have financial and other interests that differ from those of the District; (iii) the Underwriters are acting solely as principals and are not acting as municipal advisors, financial advisors or fiduciaries to the District and have not assumed any advisory or fiduciary responsibility to the District with respect to the transaction contemplated hereby and the discussions, undertakings and procedures leading thereto (irrespective of whether the Underwriters have provided other services or are currently providing other services to the District on other matters); (iv) the only contractual obligations the Underwriters, as underwriters, have to the District with respect to the transaction contemplated hereby expressly are set forth in this Contract of Purchase; and (v) the District has consulted its own financial and/or municipal, legal, accounting, tax and other advisors, as applicable, to the extent it has deemed appropriate.

(i) At 8:00 A.M., Sacramento time, on [CLOSING DATE] or at such earlier or later time or date as shall be agreed upon by the Underwriters and the District (such time and date being herein referred to as the “Closing Date”), the District will deliver the Bonds to The Depository Trust Company, New York, New York (“DTC”), for the account of the Underwriters, duly executed by the District, and the other documents herein mentioned; and the Underwriters will (i)

accept such delivery and pay the purchase price of the Bonds as set forth in paragraph (a) of this Section by wire transfer in San Francisco, California to the order of the District. Delivery of the documents herein mentioned shall be made at the offices of Orrick, Herrington & Sutcliffe LLP, 400 Capitol Mall, Suite 3000, Sacramento, California 95814, or such other place as shall have been mutually agreed upon by the District and the Underwriters, except that the Bonds shall be delivered at the offices of DTC in New York, New York or at such other place and in such manner as shall have been mutually agreed upon by the District and the Underwriters.

The Bonds shall be issued initially in fully registered book-entry eligible form (which may be typewritten) in the form of a single registered bond for each maturity of the Bonds, shall bear CUSIP numbers and shall be registered in the name of Cede & Co., as nominee of DTC.

2. Representations, Warranties and Agreements of the District. The District hereby represents, warrants to and agrees with the Underwriters that:

(a) The District is a political subdivision of the State of California duly organized and validly existing pursuant to the Municipal Utility District Act as contained in Public Utilities Code Section 11501 *et seq.* (the “Act”) and has, and at the Closing Date will have, full legal right, power and authority (i) to enter into this Contract of Purchase, the Escrow Agreement, and the Undertaking, (ii) to adopt the Resolution, (iii) to pledge the Net Revenues as set forth in the Resolution, (iv) to issue, sell and deliver the Bonds to the Underwriters pursuant to the Resolution as provided herein, (v) to acquire, construct, operate, maintain, improve and finance and refinance its Electric System (as defined in the Resolution) and conduct the business thereof as set forth in and contemplated by the Preliminary Official Statement and the Official Statement, and (vi) to carry out, give effect to and consummate the transactions contemplated by this Contract of Purchase, the Escrow Agreement, the Undertaking, the Resolution, and the Preliminary Official Statement and the Official Statement;

(b) The District has complied, and will at the Closing Date be in compliance, in all material respects, with the Act, the Resolution, and with the obligations in connection with the issuance of the Bonds on its part contained in the Resolution, the Escrow Agreement, the Bonds, the Act, the Undertaking and this Contract of Purchase;

(c) The District has duly and validly adopted the Resolution, has duly authorized and approved the execution and delivery of the Bonds, this Contract of Purchase, the Escrow Agreement, the Undertaking and the Official Statement and has duly authorized and approved the performance by the District of its obligations contained in, and the taking of any and all action as may be necessary to carry out, give effect to and consummate the transactions contemplated by, each of said documents and, at the Closing Date, the Bonds will have been validly issued and delivered, the Resolution, the Escrow Agreement, the Undertaking and this Contract of Purchase will constitute the valid, legal and binding obligations of the District enforceable in accordance with their respective terms (subject to the effect of, and restrictions and limitations imposed by or resulting from, (i) bankruptcy, insolvency, debt adjustment, moratorium, reorganization or other similar laws affecting creditors’ rights, and (ii) judicial discretion) and the Resolution will be in full force and effect;

(d) The District is not in breach of or in default under any existing constitutional provision, applicable law or administrative rule or regulation of the State of California, the United States of America, or of any department, division, agency or instrumentality of either or any applicable court or administrative decree or order, or any loan agreement, bond, note, ordinance, resolution, indenture, contract, agreement or other instrument to which the District is a party or to which the District is otherwise subject or bound which in any material way, directly or indirectly, affects the issuance of the Bonds or the validity thereof, the validity or adoption of the Resolution or the execution and delivery of the Bonds, this Contract of Purchase, the Escrow Agreement, the Undertaking or the other instruments contemplated by any of such documents to which the District is a party, and the adoption of the Resolution and compliance with the provisions of each will not, as of the date hereof and as of the Closing Date, conflict with or constitute a breach of or default in any material way under any existing constitutional provision, applicable law or administrative rule or regulation of the State of California, the United States, or of any department, division, agency or instrumentality of either or any applicable court or administrative judgment, decree or order, or any loan agreement, bond, note, ordinance, resolution, indenture, contract, agreement or other instrument to which the District is a party or to which the District or any of the property or assets of the Electric System (as defined in the Resolution) are otherwise subject or bound, and no event which would have a material and adverse effect upon the financial condition of the District has occurred and is continuing which constitutes or with the passage of time or the giving of notice, or both, would constitute a default or event of default by the District under any of the foregoing;

(e) All approvals, consents, authorizations, licenses and permits, elections and orders of or filings or registrations with any governmental authority, legislative body, board, agency or commission having jurisdiction which would constitute a condition precedent to, or the absence of which would materially adversely affect, the due performance by the District of its obligations in connection with the issuance of the Bonds under the Resolution, the Escrow Agreement, the Undertaking and this Contract of Purchase have been duly obtained or made and are in full force and effect, except for such approvals, consents and orders as may be required under the “Blue Sky” or other securities laws of any state in connection with the offering and sale of the Bonds; and, except as disclosed in the Preliminary Official Statement and the Official Statement, all authorizations, approvals, licenses, permits, consents and orders of any governmental authority, board, agency or commission having jurisdiction in the matters which are required for the due authorization of, which would constitute a condition precedent to, or the absence of which would materially adversely affect the due performance by the District of its respective obligations under, this Contract of Purchase, the Escrow Agreement, the Undertaking, the Bonds or the Resolution, or which are necessary to permit the District to carry out the transactions contemplated by the Preliminary Official Statement and the Official Statement to acquire, construct, operate, maintain, improve and finance the Electric System have been duly obtained or, where required for future performance, are expected to be obtained;

(f) The Bonds, when issued and delivered in accordance with the Resolution and this Contract of Purchase and paid for by the Underwriters on the Closing Date as provided herein, will be validly issued and outstanding special obligations of the District enforceable against the District in accordance with their terms and entitled to all the benefits and security of the Resolution; and, upon the issuance and delivery of the Bonds, the Resolution will provide, for the benefit of the holders from time to time of the Bonds, a legally valid and binding pledge of and lien on Net Revenues pledged under the Resolution, as provided in and contemplated by the Resolution;

(g) The Preliminary Official Statement, as of its date and as of the date hereof, did not and does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(h) At the time of the District's acceptance hereof and (unless the Official Statement is amended or supplemented pursuant to paragraph (i) of Section 2 hereof) at all times subsequent to the date of delivery thereof up to and including the Closing Date, the Official Statement will be true, correct, complete and final in all material respects and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(i) If, after the date of this Contract of Purchase and until 25 days after the end of the "underwriting period" (as defined in Rule 15c2-12), any event shall occur that might cause the Official Statement to contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, the District hereby covenants and agrees, to the extent it has knowledge of such event, to notify the Underwriters (and for the purposes of this clause to provide the Underwriters with such information as they may from time to time reasonably request), and, if in the opinion of the Underwriters and their counsel such event requires the preparation and publication of a supplement or amendment to the Official Statement, at its expense to supplement or amend the Official Statement in a form and manner approved by the Underwriters and furnish to the Underwriters a reasonable number of copies of such supplement or amendment. For purposes of this Contract of Purchase, the District may assume that the end of the "underwriting period" has occurred on the Closing Date unless the District is otherwise notified by the Underwriters on or prior to the Closing Date. If the Underwriters notify the District that the Closing Date is not the end of the "underwriting period", then the Underwriters shall further notify the District of the date that is the end of the "underwriting period" (as defined in Rule 15c2-12);

(j) If the Official Statement is supplemented or amended pursuant to paragraph (i) of Section 2 of this Contract of Purchase, at the time of each supplement or amendment thereto and (unless subsequently again supplemented or amended pursuant to such paragraph) at all times subsequent thereto during the "underwriting period", the Official Statement as so supplemented or amended will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which made, not misleading;

(k) Except as disclosed in the Preliminary Official Statement and the Official Statement, no litigation, action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, regulatory agency, public board or body, is pending or, to the knowledge of the officer of the District executing this Contract of Purchase after due investigation, threatened (i) in any way affecting the corporate existence of the District or the titles of its officers to their respective offices, (ii) affecting or seeking to prohibit, restrain or enjoin the issuance, sale or delivery of any of the Bonds, the application of the proceeds thereof in accordance with the Resolution, or the collection or application of Revenues (as defined in the Resolution) or the collection or application of the Net Revenues pledged to pay the principal of and interest on the Bonds under the Resolution or in any way contesting or affecting the validity or enforceability

of any of the Bonds, the Escrow Agreement, the Resolution, the Undertaking, this Contract of Purchase or any action of the District contemplated by any of said documents, (iii) which may result in any material adverse change relating to the District, other than routine litigation of the type which normally accompanies its operation of its generation, transmission and distribution facilities, (iv) contesting the completeness or accuracy of the Preliminary Official Statement or the Official Statement or the powers of the District or its authority with respect to the Bonds, the adoption of the Resolution, or the execution and delivery of the Undertaking, the Escrow Agreement, or this Contract of Purchase, or any action of the District contemplated by any of said documents, and (v) which would adversely affect the exclusion from gross income for federal income tax purposes of interest paid on the Bonds, nor to the knowledge of the officer of the District executing this Contract of Purchase is there any basis therefor;

(l) The District will furnish such information, execute such instruments and take such other action in cooperation with the Underwriters as the Underwriters may reasonably request (i) to qualify the Bonds for offer and sale under the “Blue Sky” or other securities laws and regulations of such states and other jurisdictions of the United States as the Senior Underwriter may designate, and (ii) to determine the eligibility of the Bonds for investment under the laws of such states and other jurisdictions and will use its best efforts to continue such qualifications in effect so long as required for the distribution of the Bonds; provided that in connection therewith the District shall not be required to execute or file a general or special consent to service of process or qualify to do business in any jurisdiction and will advise the Senior Underwriter promptly of receipt by the District of any written notification with respect to the suspension of the qualification of the Bonds for sale in any jurisdiction or written notification of the initiation or threat of any proceeding for that purpose;

(m) The audited financial statements of the District for the years ending December 31, 2023 and December 31, 2022 heretofore delivered to the Underwriters and incorporated by reference in the Preliminary Official Statement and the Official Statement as Appendix B fairly present the financial position of the District as of the dates indicated and such financial statements have been prepared in conformity with generally accepted accounting principles applied on a consistent basis;

(n) Between the date hereof and the Closing Date, the District will not, without the prior written consent of the Senior Underwriter, offer or issue any bonds, notes or other obligations for borrowed money, or incur any material liabilities, direct or contingent, nor will there be any adverse change of a material nature in the financial position, results of operations or condition, financial or otherwise, of the District, in either case other than in the ordinary course of its business or as disclosed in the Preliminary Official Statement or the Official Statement or as otherwise disclosed to the Senior Underwriter;

(o) The Bonds, the Escrow Agreement, the Resolution and the Undertaking conform to the descriptions thereof contained in the Preliminary Official Statement and the Official Statement;

(p) The District has the legal authority to apply and will apply, or cause to be applied, the proceeds from the sale of the Bonds as provided in and subject to all of the terms and provisions of the Resolution and as described in the Preliminary Official Statement and the Official

Statement, including for payment of District expenses incurred in connection with the negotiation, marketing, issuance and delivery of the Bonds to the extent required by Section 7 (Expenses), and will not take or omit to take any action which action or omission will adversely affect the exclusion from gross income for federal income tax purposes of the interest on the Bonds;

(q) Any certificate signed by any official of the District, and delivered to the Underwriters, shall be deemed a representation and warranty by the District to the Underwriters as to the statements made therein; and

(r) Except as disclosed in the Preliminary Official Statement and the Official Statement, during the last five years the District has complied in all material respects with all previous undertakings required by Rule 15c2-12.

3. Conditions to the Obligations of the Underwriters. The obligations of the Underwriters to accept delivery of and pay for the Bonds on the Closing Date shall be subject to the performance by the District of its obligations to be performed hereunder at or prior to the Closing Date and to the fulfillment of the following conditions:

(a) The representations, warranties and covenants of the District contained herein shall be true, complete and correct on the date hereof and as of the Closing Date as if made on the Closing Date;

(b) At the Closing Date, the Resolution shall have been duly adopted and shall be in full force and effect, and shall not have been repealed, amended, modified or supplemented, except as may have been agreed to in writing by the Underwriters, and there shall have been taken in connection therewith, with the issuance of the Bonds and with the transactions contemplated thereby and by this Contract of Purchase, all such actions as, in the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel (“Bond Counsel”), shall be necessary and appropriate;

(c) At the Closing Date, the Official Statement shall not have been amended, modified or supplemented, except as may have been agreed to in writing by the Underwriters;

(d) At or prior to the Closing Date, the Underwriters shall have received copies of the following documents, in each case satisfactory in form and substance to the Underwriters:

(1) The Official Statement executed on behalf of the District by its Chief Executive Officer and General Manager, any Member of its Executive Committee, its Treasurer, its Secretary or its Chief Financial Officer (each an “Authorized Representative”);

(2) The Undertaking executed on behalf of the District by an Authorized Representative;

(3) The Sixty-Seventh Supplemental Resolution, with only such supplements or amendments thereto as may have been agreed to by the Underwriters and certified by an authorized officer of the District under its seal as having been duly adopted by the District and as being in full force and effect, and the Resolution, certified by an authorized officer of the District as being in full force and effect, with such supplements

and amendments thereto adopted after the date hereof as may have been agreed to by the Underwriters;

(4) An opinion or opinions relating to the Bonds, dated the Closing Date and addressed to the District, of Bond Counsel, in substantially the form included in the Official Statement as Appendix E, together with a letter or letters of such Bond Counsel, dated the Closing Date and addressed to the Underwriters, to the effect that the foregoing opinion or opinions addressed to the District may be relied upon by the Underwriters to the same extent as if such opinion or opinions were addressed to them;

(5) An opinion or opinions, dated the Closing Date and addressed to the Senior Underwriter, of Bond Counsel, in substantially the form attached hereto as Exhibit E;

(6) An opinion, dated the Closing Date and addressed to the Senior Underwriter, of General Counsel to the District, in substantially the form attached hereto as Exhibit C;

(7) An opinion, dated the Closing Date and addressed to the Underwriters, of Nixon Peabody LLP, as counsel for the Underwriters (“Underwriters’ Counsel”), to the effect that (i) the Bonds are exempt from the registration requirements of the Securities Act of 1933, as amended, and the Resolution is exempt from qualification under the Trust Indenture Act of 1939, as amended; (ii) the Undertaking complies as to form in all material respects with the requirements of paragraph (b)(5) of the Rule applicable to the primary offering of the Bonds; and (iii) based upon the information made available to them in the course of their participation in the preparation of the Preliminary Official Statement and the Official Statement as counsel to the Underwriters and without having undertaken to determine independently, or assuming any responsibility for, the accuracy, completeness or fairness of the statements contained in the Preliminary Official Statement and the Official Statement, they do not believe that (A) the Preliminary Official Statement, as of its date and as of the date of the Contract of Purchase, and (B) the Official Statement as of its date and as of the Closing Date, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (except for the information relating to Cede & Co., DTC or the operation of the book-entry system, the Appendices to the Official Statement, except Appendices D and F, and summaries thereof and references thereto, and other financial, accounting and statistical data included therein, as to all of which no view need be expressed); and (iii) with respect to such matters as the Underwriters may reasonably require;

(8) A certificate, dated the Closing Date, signed by an Authorized Representative of the District in substantially the form attached hereto as Exhibit D (but in lieu of or in conjunction with such certificate the Underwriters may, in its sole discretion, accept certificates or opinions of General Counsel to the District, or of other counsel acceptable to the Underwriters, that in the opinion of such counsel the issues raised in any pending or threatened litigation referred to in such certificate are without substance or that the contentions of all plaintiffs therein are without merit);

(9) The Escrow Agreement, executed by the District and the Escrow Agent;

(10) An acceptance of and agreement to the provisions of the Sixty-Seventh Supplemental Resolution executed by the Trustee under the Resolution in form and substance acceptable to the Underwriters;

(11) A tax certificate related to the Bonds in substance and form satisfactory to Bond Counsel;

(12) Ratings of the Bonds from [S&P Global Ratings (“S&P”) of not less than “[AA (stable outlook)],” from Fitch Ratings, Inc. (“Fitch”) of not less than “[AA (stable outlook)],” and from Moody’s Investors Service Inc. (“Moody’s”) of not less than “[Aa2 (stable outlook)]”];

(13) A report of [_____], as verification agent (the “Verification Agent”) with respect to the sufficiency of amounts deposited pursuant to the Escrow Agreement and the calculation of the make-whole redemption price of the Refunded Bonds, and an opinion of Bond Counsel respecting the defeasance of the Refunded Bonds;

(14) An opinion of counsel to the Trustee/Escrow Agent, dated the Closing Date, addressed to the Underwriters, to the effect that (i) the Trustee/Escrow Agent is a national banking association duly organized and validly existing under the laws of the United States of America having full power and being qualified to enter into, accept and agree to the provisions of the Resolution and to enter into and perform the Undertaking and the Escrow Agreement, (ii) the Undertaking and the Escrow Agreement have been duly authorized, executed and delivered by the Trustee/Escrow Agent and, assuming due authorization, execution and delivery by the other parties thereto, constitutes the valid and binding obligation of the Trustee/Escrow Agent enforceable in accordance with its terms, subject to laws relating to bankruptcy, insolvency, moratorium, reorganization or other similar laws affecting creditors’ rights generally, to the application of equitable principals and to the exercise of judicial discretion in appropriate cases, and to enter into and perform the Undertaking and the Escrow Agreement, (iii) all approvals, consents and orders of any governmental authority or agency having jurisdiction in this matter that would constitute a condition precedent to the performance by the Trustee/Escrow Agent of its duties and obligations under the Resolution, the Escrow Agreement, and the Undertaking have been obtained and are in full force and effect, and (iv) the acceptance of the duties and obligations of the Trustee/Escrow Agent under the Resolution, the Escrow Agreement, and the Undertaking and the consummation of the transactions on the part of the Trustee/Escrow Agent contemplated therein, and the compliance by the Trustee/Escrow Agent, as applicable, with the terms, conditions and provisions of such document do not contravene any provisions of applicable law or regulation or any order or decree, writ or injunction or the Articles of Association or Bylaws of the Trustee/Escrow Agent, and, to the best knowledge of such counsel, will not require the consent under or result in a breach of or a default under, any resolution, agreement or other instrument to which the Trustee/Escrow Agent is a party or by which it may be bound;

(15) A copy of the Blanket Letter of Representations to DTC relating to the Bonds signed by DTC and the District; and

(16) Such additional legal opinions, certificates, instruments and other documents as the Underwriters may reasonably request to evidence the truth and accuracy and completeness, as of the date hereof and as of the Closing Date, of the District's representations and warranties contained herein and of the statements and information contained in the Preliminary Official Statement or the Official Statement, and the due performance or satisfaction by the District at or prior to the Closing Date of all agreements then to be performed and all conditions then to be satisfied by the District in connection with the transactions contemplated hereby and by the Resolution and the Preliminary Official Statement or the Official Statement.

If any of the conditions to the obligations of the Underwriters contained in this Section or elsewhere in this Contract of Purchase with respect to the Bonds shall not have been satisfied when and as required herein, all obligations of the Underwriters hereunder with respect to the Bonds may be terminated by the Underwriters at, or at any time prior to, the Closing Date by written notice to the District.

4. **Offering.** The obligations of the District to sell and to deliver the Bonds on the Closing Date to the Underwriters shall be subject to the following conditions:

(a) The entire \$[PAR] aggregate principal amount of the Bonds shall be purchased, accepted and paid for by the Underwriters on the Closing Date; and

(b) The District shall receive an Issue Price Certificate of the Senior Underwriter substantially in the form attached hereto as Exhibit F with respect to the Bonds.

5. **Issue Price of the Bonds.** The Senior Underwriter, on behalf of the Underwriters, agrees to assist the District in establishing the issue price of the Bonds and shall execute and deliver to the District at Closing an "issue price" or similar certificate substantially in the form attached hereto as Exhibit F, together with the supporting pricing wires or equivalent communications, with modifications to such certificate as may be deemed appropriate or necessary, in the reasonable judgment of the Senior Underwriter, the District and Bond Counsel, to accurately reflect, as applicable, the sales price or prices or the initial offering price or prices to the public of the Bonds.

(b) [Except for the maturities set forth in Schedule A of Exhibit F attached hereto,] the District will treat the first price at which 10% of each maturity of the Bonds (the "10% test") is sold to the public as the issue price of that maturity (if different interest rates apply within a maturity, each separate CUSIP number within that maturity will be subject to the 10% test).

(c) [The Senior Underwriter confirms that the Underwriters have offered the Bonds to the public on or before the date of this Contract of Purchase at the offering price or prices (the "initial offering price"), or at the corresponding yield or yields, set forth in Schedule A of Exhibit F attached hereto. Schedule A of Exhibit F attached hereto sets forth, as of the date of this Contract of Purchase, the maturities, if any, of the Bonds for which the 10% test has not been satisfied and

for which the District and the Senior Underwriter, on behalf of the Underwriters, agree that the restrictions set forth in the next sentence shall apply, which will allow the District to treat the initial offering price to the public of each such maturity as of the sale date as the issue price of that maturity (the “hold-the-offering-price rule”). So long as the hold-the-offering-price rule remains applicable to any maturity of the Bonds, the Senior Underwriter will neither offer nor sell unsold Bonds of that maturity to any person at a price that is higher than the initial offering price to the public during the period starting on the sale date and ending on the earlier of the following:

(1) the close of the fifth (5th) business day after the sale date; or

(2) the date on which the Underwriters have sold at least 10% of that maturity of the Bonds to the public at a price that is no higher than the initial offering price to the public.

The Senior Underwriter shall promptly advise the District or the District’s municipal advisor when the Underwriters have sold 10% of that maturity of the Bonds to the public at a price that is no higher than the initial offering price to the public, if that occurs prior to the close of the fifth (5th) business day after the sale date.

The District acknowledges that, in making the representation set forth in this subsection, the Senior Underwriter will rely on (i) the agreement of each Underwriter to comply with the hold-the-offering-price rule, as set forth in an agreement among underwriters and the related pricing wires, (ii) in the event a selling group has been created in connection with the initial sale of the Bonds to the public, the agreement of each dealer who is a member of the selling group to comply with the hold-the-offering-price rule, as set forth in a selling group agreement and the related pricing wires, and (iii) in the event that an Underwriter is a party to a retail distribution agreement that was employed in connection with the initial sale of the Bonds to the public, the agreement of each broker-dealer that is a party to such agreement to comply with the hold-the-offering-price rule, as set forth in the retail distribution agreement and the related pricing wires. The District further acknowledges that each Underwriter shall be solely liable for its failure to comply with its agreement regarding the hold the offering price rule and that no Underwriter shall be liable for the failure of any other Underwriter, or of any dealer who is a member of a selling group, or of any broker-dealer that is a party to a retail distribution agreement to comply with its agreement regarding the hold-the-offering-price rule as applicable to the Bonds.]

(d) [The Senior Underwriter confirms that:

(1) any agreement among underwriters, any selling group agreement and each retail distribution agreement (to which the Senior Underwriter is a party) relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each Underwriter, each dealer who is a member of the selling group, and each broker-dealer that is a party to such retail distribution agreement, as applicable, to (A)(i) report the prices at which it sells to the public the unsold Bonds of each maturity allotted to it until it is notified by the Senior Underwriter that either the 10% test has been satisfied as to the Bonds of that maturity or all Bonds of that maturity have been sold to the public and (ii) comply with the hold-the-offering-price rule, if applicable, in each case if and for

so long as directed by the Senior Underwriter and as set forth in the related pricing wires, (B) promptly notify the Senior Underwriter of any sales of the Bonds that, to its knowledge, are made to a purchaser who is a related party to an underwriter participating in the initial sale of the Bonds to the public (each such term being used as defined below) and (C) acknowledge that, unless otherwise advised by the Underwriter, dealer or broker-dealer, the Senior Underwriter shall assume that each order submitted by the Underwriter, dealer or broker-dealer is a sale to the public; and

(2) any agreement among underwriters relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each Underwriter that is a party to a retail distribution agreement to be employed in connection with the initial sale of the Bonds to the public to require each broker-dealer that is a party to such retail distribution agreement to (A) report the prices at which it sells to the public the unsold Bonds of each maturity allotted to it until it is notified by the Senior Underwriter or the Underwriter that either the 10% test has been satisfied as to the Bonds of that maturity or all Bonds of that maturity have been sold to the public and (B) comply with the hold-the-offering-price rule, if applicable, in each case if and for so long as directed by the Senior Underwriter or the Underwriter and as set forth in the related pricing wires.]

(e) The Underwriters acknowledge that sales of any Bonds to any person that is a related party to an Underwriter shall not constitute sales to the public for purposes of this section. Further, for purposes of this section:

(1) “public” means any person other than an underwriter or a related party,

(2) “underwriter” means (A) any person that agrees pursuant to a written contract with the District (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the public and (B) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (A) to participate in the initial sale of the Bonds to the public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the public),

(3) a purchaser of any of the Bonds is a “related party” to an underwriter if the underwriter and the purchaser are subject, directly or indirectly, to (i) more than 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (ii) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (iii) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other), and

(4) “sale date” means the date of execution of this Contract of Purchase by all parties.

6. **Termination.** The Underwriters shall have the right to terminate their obligations under this Contract of Purchase to purchase, accept delivery of and to pay for the Bonds, if,

(a) between the date hereof and the Closing Date, the market price or marketability, or the ability of the Underwriters to enforce contracts for the sale, at the initial offering prices set forth in the Official Statement, of the Bonds have been materially adversely affected, in the judgment of the Underwriters, (evidenced by a written notice to the District terminating the obligation of the Underwriters to accept delivery of and pay for the Bonds), by reason of any of the following:

(1) (x) any legislation which is (A) enacted by Congress, (B) favorably reported for passage to either House of the Congress of the United States by any Committee of such House to which such legislation has been referred for consideration, or (C) recommended to the Congress for passage by the President of the United States or the Treasury Department, but only, however, if the occurrence of any of the foregoing events is generally accepted by the municipal bond market as potentially affecting the federal tax status of the District, its property or income or the interest on its bonds or notes (including the Bonds), (y) any decision rendered by a court established under Article III of the Constitution of the United States or the Tax Court of the United States, or (z) a final order, ruling, regulation or official statement issued or made by or on behalf of the Treasury Department of the United States or the Internal Revenue Service with the purpose or effect, directly or indirectly, of imposing federal income taxation upon such interest as would be received by the holders of the Bonds, or upon such revenues or other income of the general character expected to be received by the District; provided, however, that the enactment of legislation which only diminishes the value of, as opposed to eliminating the exclusion from gross income for federal income tax purposes will not give the Underwriters the right to terminate their obligations hereunder;

(2) Legislation enacted (or resolution passed) by the Congress or a final order, ruling, regulation or official statement is issued or made by or on behalf of the Securities and Exchange Commission, or any other governmental agency having jurisdiction of the subject matter, to the effect that obligations of the general character of the Bonds are not exempt from registration under or other requirements of the Securities Act of 1933, as amended, or are not exempt from qualification under, or other requirements of, the Trust Indenture Act of 1939, as amended, or that the issuance, offering or sale of the Bonds or obligations of the general character of the Bonds, including any or all underlying arrangements, as contemplated hereby or by the Preliminary Official Statement or the Official Statement, otherwise is or would be in violation of the federal securities laws as amended and then in effect;

(3) Any new material outbreak or escalation of hostilities having a material effect on the financial markets of the United States or the declaration by the United States of a national emergency or war or the occurrence of any other local, national or international calamity, crisis or event relating to the effective operation of the government of or the financial community in the United States or an escalation thereof, including, without limitation, a downgrade of the sovereign debt rating of the United States by any major credit rating agency or payment default on United States Treasury obligations;

(4) the declaration of a general banking moratorium by federal, New York or California authorities, or the general suspension of trading on the New York Stock Exchange or any other national securities exchange, or any material disruption in commercial banking or securities settlement or payment services or clearing services;

(5) the imposition by the New York Stock Exchange or other national securities exchange, or any governmental authority, of any material restrictions not now in force with respect to the Bonds or obligations of the general character of the Bonds or securities generally, or the material increase of any such restrictions now in force, including those relating to the net capital requirements of, the Underwriters;

(6) the adoption of any amendment to the federal or California Constitution, decision by any federal or California court, or enactment by any federal or California legislative body materially adversely affecting (i) the District or the right of the District to receive or to pledge any of the Net Revenues, or (ii) the validity or enforceability of this Contract of Purchase, the Bonds or the Resolution;

(7) the adoption of any amendment to the California Constitution, decision by any California court, or enactment by any California legislative body adversely affecting the exemption of state or local income tax upon such interest as would be received by the holders of the Bonds, or

(8) (i) a downgrading or suspension of any rating (without regard to credit enhancement) by Moody's, S&P, or Fitch of any debt securities issued by the District, or (ii) there shall have been any official statement as to a possible downgrading (such as being placed on "credit watch" or "negative outlook" or any similar qualification) of any rating by Moody's, S&P or Fitch of any debt securities issued by the District, including the Bonds.

(b) an event occurs, or information becomes known, which, in the judgment of the Underwriters, makes untrue in any material respect any statement or information contained in the Official Statement, or has the effect that the Official Statement contains any untrue statement of material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

7. **Expenses.** (a) Except as set forth in paragraph (b) of this Section, the Underwriters shall be under no obligation to pay, and the District shall pay, or cause to be paid, all expenses incident to the performance of the District's obligations hereunder including, but not limited to, the cost of word processing and reproducing, executing and delivering the Bonds to the Underwriters; the cost of preparation, printing (and/or word processing and reproducing), distribution and delivery of the Resolution; the cost of printing and distributing copies of the Preliminary Official Statement and the Official Statement in sufficient quantities for distribution in connection with the sale of the Bonds (including resales in the secondary market); the fees and disbursements of Bond Counsel; the fees and disbursements of PFM Financial Advisors LLC for its services as Municipal Advisor to the District; the fees and disbursements of any other engineers, accountants, and any other experts or consultants retained in connection with the issuance of the Bonds; the fees and disbursements of the Trustee/Escrow Agent and Verification Agent; fees charged by the rating agencies for rating the Bonds; any advertising expenses; filing fees; CUSIP charges; or fees and expenses of any credit enhancement; expenses incurred by the Underwriters on behalf of the District relating to food, transportation or lodging for District staff members attending the bond pricing are to be reimbursed by the District through proceeds of the Bonds or available funds of the District (the District's obligations in regard to these expenses survive if delivery of the Bonds fails due to one of the conditions set forth in Section 3 hereof or this Contract of Purchase is terminated pursuant to Section 6 hereof) and any other expenses not specifically enumerated in paragraph (b) of this Section incurred in connection with the issuance of the Bonds.

(b) The District shall be under no obligation to pay, and the Underwriters shall pay (from the expense component of the underwriting discount), the cost of preparation of the Agreement Among Underwriters and the letter of instructions relating thereto and this Contract of Purchase; the cost of wiring funds for the payment of the purchase price of the Bonds; the fees and expenses of DTC incurred with respect to depositing the Bonds therewith; expenses to qualify the Bonds for sale under any "Blue Sky" laws; fees to the California Debt and Investment Advisory Commission; and all other expenses incurred by the Underwriters in connection with its public offering and distribution of the Bonds not specifically enumerated in paragraph (a) of this Section, including the fees and disbursements of Underwriters' Counsel. Notwithstanding that the fees to the California Debt and Investment Advisory Commission are solely the legal obligation of the Underwriters, the District agrees to reimburse the Underwriters for such fees.

8. **Notices.** Any notice or other communication to be given to the District under this Contract of Purchase may be given by delivering the same in writing to Sacramento Municipal Utility District, at 6201 S Street, Sacramento, California 95817-1899; and any notice or other communication to be given to the Underwriters under this Contract of Purchase may be given by delivering the same in writing to BofA Securities, Inc., 315 Montgomery Street, 1st Floor, San Francisco, CA 94104, Attention: Bradford Walker, Managing Director.

9. **Parties in Interest.** This Contract of Purchase is made solely for the benefit of the District and the Underwriters (including successors or assigns of any Underwriter) and no other person shall acquire or have any right hereunder or by virtue hereof. The term "successors and assigns" as used in this Section shall not include any purchaser of the Bonds, as such purchaser, from any of the several Underwriters.

10. Survival of Representations and Warranties. The representations and warranties of the District, set forth in or made pursuant to this Contract of Purchase, shall not be deemed to have been discharged, satisfied or otherwise rendered void by reason of the closing or termination of this Contract of Purchase and regardless of any investigations or statements as to the results thereof made by or on behalf of the Underwriters and regardless of delivery of and payment for the Bonds.

11. Counterparts. This Contract of Purchase may be executed in several counterparts, which together shall constitute one and the same instrument.

12. California Law Governs; Venue. The validity, interpretation and performance of this Contract of Purchase shall be governed by the laws of the State of California. Any action or proceeding to enforce or interpret this Contract of Purchase shall be brought, commenced or prosecuted in the County of Sacramento, California.

[remainder of page intentionally left blank]

13. **Entire Agreement.** This Contract of Purchase when accepted by you in writing as heretofore specified shall constitute the entire agreement between us.

14. **Effectiveness.** This Contract of Purchase shall become effective and binding upon the respective parties hereto upon the execution of the acceptance hereof by an authorized officer of the District and shall be valid and enforceable as of the time of such acceptance.

Very truly yours,

BOFA SECURITIES, INC.,
BARCLAYS CAPITAL INC.,
GOLDMAN SACHS & CO. LLC,
J.P. MORGAN SECURITIES LLC,
MORGAN STANLEY & CO. LLC, and
WELLS FARGO BANK, NATIONAL
ASSOCIATION

BY: BOFA SECURITIES, INC., as Senior
Underwriter

Bradford Walker
Managing Director

Accepted: [SALE DATE]

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Russell Mills
Treasurer

[Signature page to Series N Bonds Contract of Purchase]

Exhibit A

SACRAMENTO MUNICIPAL UTILITY DISTRICT

[\$_____] Electric Revenue Refunding Bonds, 2024 Series N

<u>Maturity</u> <u>(_____)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Yield</u>	<u>Price</u>	<u>General</u> <u>Rule</u> <u>Maturities</u>	<u>Hold the</u> <u>Offering</u> <u>Price Rule</u> <u>Maturities</u>
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Optional Redemption. On any date on or after [May 15], 20__, the Bonds maturing on and after [May 15], 20__ are subject to redemption prior to their stated maturities at the option of the District, from any source of available funds, as a whole or in part, by lot, at the principal amount thereof, without premium, together with accrued interest to the date fixed for redemption.

Mandatory Redemption. The Bonds maturing on [May 15], 20__, are subject to mandatory redemption prior to maturity, in part, by lot, from sinking fund payments required for the Bonds by the Sixty-Seventh Supplemental Resolution at the principal amount thereof together with the accrued interest thereon to the date fixed for redemption, without premium, as shown below:

Sinking Fund Payment Dates ([May 15])	Principal Amount
†	\$

† Maturity.

Selection of Bonds for Redemption. If less than all of a maturity of the Bonds is to be redeemed, the Trustee shall select the Bonds of such maturity to be redeemed, from the Outstanding Bonds of such maturity not previously called for redemption, by lot in any manner the Trustee deems fair. For so long as the book-entry only system is in effect with respect to the Bonds, DTC shall select the Bonds to be redeemed in accordance with the procedures of DTC.

Notice of Redemption. Notice of redemption for the Bonds will be given by publication at least once in financial newspapers or journals, selected by the Trustee, of general circulation in San Francisco, California, Chicago, Illinois, and New York, New York, each such publication to be not less than 20 nor more than 60 days before the date fixed for redemption, if at any time the Bonds are not in book entry form. Notice also will be mailed to the registered owners of any Bonds designated for redemption, but failure to mail such notice or any defect therein with respect to any particular Bond will not affect the validity of the proceedings for the redemption of any other Bonds. For so long as the book-entry-only system is in effect with respect to the Bonds, the Trustee will mail notice of redemption solely to DTC or its nominee or its successor. Any failure of DTC or its successor, or of a direct or indirect DTC participant, to notify a beneficial owner of a Bond of any redemption will not affect the sufficiency or validity of the redemption of any Bond. The District may instruct the Trustee to give conditional notice of optional redemption, which may be conditioned upon the receipt of moneys or any other event.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

**Exhibit B to the Contract of Purchase
(Official Statement)**

SACRAMENTO MUNICIPAL UTILITY DISTRICT

**Exhibit C to the Contract of Purchase
(Opinion of General Counsel to the
Sacramento Municipal Utility District)**

[CLOSING DATE]

[TO BE UPDATED]

BofA Securities, Inc.
315 Montgomery Street, 1st Floor
San Francisco, CA 94104

Re: Sacramento Municipal Utility District
[\$[PAR] Electric Revenue Refunding Bonds, 2024 Series N

Ladies and Gentlemen:

This opinion is being delivered pursuant to Paragraph 3(d)(6) of the Contract of Purchase (the “Contract of Purchase”), dated [SALE DATE], between BofA Securities, Inc., as Senior Managing Underwriter named therein (the “Senior Underwriter”), and the Sacramento Municipal Utility District (the “District”) relating to the above-captioned bonds (the “Bonds”).

As counsel to the District, I have reviewed (i) Resolution No. 6649 of the District, adopted on January 7, 1971, as amended and supplemented to date, including as amended and supplemented by Resolution No. [RESO NO.], adopted on March 21, 2024 (as so amended and supplemented, the “Resolution”); (ii) the Continuing Disclosure Agreement, dated the date hereof (the “Undertaking”), between the District and U.S. Bank Trust Company, National Association, as trustee (in such capacity, the “Trustee”); (iii) the Preliminary Official Statement of the District, dated [POS DATE] (the “Preliminary Official Statement”); (iv) the Official Statement of the District, dated [SALE DATE] (the “Official Statement”) (v) the escrow agreement, dated the date hereof (the “Escrow Agreement”), between the District and U.S. Bank Trust Company, National Association, as escrow agent (in such capacity, the “Escrow Agent”), and (vi) such other documents, opinions and matters to the extent I deemed necessary to provide the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. I have assumed the genuineness of all documents and signatures presented to me (whether as originals or as copies) and the due and legal execution and delivery by, and validity against, any parties other than the District. I have not undertaken to verify independently, and have assumed, the accuracy of the factual matters represented, warranted or certified in the documents referred to in the second paragraph hereof. I have further assumed compliance with all covenants and agreements contained in such documents.

I call attention to the fact that the rights and obligations under the Resolution, the Escrow Agreement, the Undertaking, and the Contract of Purchase may be subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, and to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against municipal utility districts in the State of California. I express no opinion with respect to any indemnification, contribution, choice of law, choice of forum or waiver provisions contained therein.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, I am of the opinion that:

1. The District is a political subdivision of the State of California duly organized and validly existing under the Act, as amended, and has full legal right, power and authority to execute and deliver (or adopt, as the case may be), and to perform its obligations under, the Resolution, the Escrow Agreement, the Undertaking and the Contract of Purchase.

2. The Contract of Purchase, the Escrow Agreement, and the Undertaking have been duly authorized, executed and delivered by the District, and, assuming due authorization, execution and delivery by each of the parties thereto other than the District, constitute the legal, valid and binding obligations of the District, enforceable against the District in accordance with their respective terms.

3. The District is not in breach of or default under any existing constitutional provision, applicable law or administrative regulation of the State of California or the United States or any applicable judgment or decree or any loan agreement, indenture, bond, note, resolution, agreement or other instrument known to me after reasonable inquiry to which the District is a party or to which the District or any of its property or assets is otherwise subject which would have a material adverse effect on the financial condition or operations of the District, and no event has occurred and is continuing which with the passage of time or the giving of notice, or both, would constitute a default or event of default under any such instrument which would have a material adverse effect on the financial condition or operations of the District; and the execution and delivery of the Bonds, the Escrow Agreement, the Undertaking and the Contract of Purchase and the adoption of the Resolution, and compliance with any existing constitutional provision, law, administrative regulation, judgment, decree, loan agreement, indenture, bond, note, resolution, agreement or other instrument known to me after reasonable inquiry to which the District is a party or to which the District or any of its property or assets is otherwise subject will not, as of the date hereof, conflict with or constitute a breach of or default under any such instrument which would have a material adverse effect on the financial condition or operations of the District, nor will any such execution, delivery, adoption or compliance result in the creation or imposition of any lien, charge or other security interest or encumbrance of any nature whatsoever upon any of the property or assets of the District or under the terms of any such law, regulation or instrument, except as expressly provided by the Bonds and the Resolution.

4. The statements contained in the Preliminary Official Statement and the Official Statement which purport to describe certain provisions of the Bonds, the Escrow Agreement, the

Undertaking, and the Resolution present a fair and accurate summary of such provisions for the purpose of use in the Preliminary Official Statement and the Official Statement.

5. Except as described or referred to in the Preliminary Official Statement and the Official Statement, as of the date hereof, there is no action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, public board or body, pending or, to the best of my knowledge, threatened against the District affecting the corporate existence of the District or the titles of its officers to their respective offices, or affecting or seeking to prohibit, restrain or enjoin the sale, issuance or delivery of the Bonds or the collection of the Revenues (as defined in the Resolution) or the Net Revenues (as defined in the Resolution) pledged or to be pledged to pay the principal of and interest on the Bonds or contesting or affecting as to the District the validity or enforceability of the Act, the Bonds, the Resolution, the Escrow Agreement, the Contract of Purchase or the Undertaking, or contesting the tax exempt status of interest on the Bonds, or which may result in any material adverse change relating to the District, other than routine litigation of the type which normally accompanies its operation of its generation, transmission and distribution facilities, or contesting the completeness or accuracy of the Preliminary Official Statement or the Official Statement or any supplement or amendment thereto, or contesting the powers of the District or any authority for the issuance of the Bonds, the adoption of the Resolution, or the execution and delivery by the District of the Contract of Purchase, the Escrow Agreement, or the Undertaking, nor, to the best of my knowledge, is there any basis for any such action, suit, proceeding, inquiry or investigation wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Act or the authorization, execution, delivery or performance by the District of the Bonds, the Resolution, the Escrow Agreement, the Undertaking, or the Contract of Purchase.

6. Based upon my review of the Preliminary Official Statement and the Official Statement as General Counsel to the District and without having undertaken to determine independently the accuracy, completeness or fairness of the statements contained in the Preliminary Official Statement and the Official Statement (except as specifically set forth in paragraph 4 hereof), I have no reason to believe that the statements contained in the Preliminary Official Statement (except for information relating Cede & Co., DTC or the operation of the book-entry system, the Appendices (except Appendix A) to the Preliminary Official Statement, and other financial and statistical data included therein, as to all of which I express no view) as of its date and as of the date of the Contract of Purchase contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading and the Official Statement (except for information relating Cede & Co., DTC or the operation of the book-entry system, the Appendices (except Appendix A) to the Official Statement, and other financial and statistical data included therein, as to all of which I express no view) (A) as of the date of the Official Statement contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading or (B) as of the date hereof contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

For purposes of the opinions expressed herein, I have assumed that an agreement or other document is “material” to the District if it involves amounts in excess of \$10,000,000 and

that a matter would result in a “material adverse change” to the District if the financial consequences involved would exceed \$10,000,000.

I understand that you are relying upon the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel, with respect to the validity of the Bonds and the exclusion of interest on the Bonds from gross income for federal income tax purposes and the Bonds for purposes of State of California income taxation and, accordingly, render no opinion with respect thereto.

Very truly yours,

SACRAMENTO MUNICIPAL UTILITY DISTRICT

Exhibit D to the Contract of Purchase

CERTIFICATE

The Sacramento Municipal Utility District (the “District”), hereby certifies that:

(1) The representations and warranties of the District (excluding those representations and warranties contained in Section 2(e) and Section 2(k) of the hereinafter defined Contract of Purchase) contained in the Contract of Purchase, dated [SALE DATE], between the District and the Underwriters named therein (the “Contract of Purchase”) with respect to the sale by the District of \$[PAR] aggregate principal amount of its Electric Revenue Refunding Bonds, 2024 Series N (the “Bonds”), are true and correct on and as of the Closing Date as if made on the Closing Date.

(2) All approvals, consents, authorizations, licenses and permits, elections and orders of or filings or registrations with any governmental authority, legislative body, board, agency or commission having jurisdiction which would constitute a condition precedent to, or the absence of which would materially adversely affect, the due performance by the District of its obligations in connection with the issuance of the Bonds under the Resolution, the Escrow Agreement, the Undertaking, and the Contract of Purchase have been duly obtained or made and are in full force and effect, except for such approvals, consents and orders as may be required under the “Blue Sky” or other securities laws of any state in connection with the offering and sale of the Bonds; and, except as disclosed in the Preliminary Official Statement and the Official Statement, all authorizations, approvals, licenses, permits, consents and orders of any governmental authority, board, agency or commission having jurisdiction in the matters which are required for the due authorization of, which would constitute a condition precedent to, or the absence of which would materially adversely affect the due performance by the District of its respective obligations under, the Contract of Purchase, the Escrow Agreement, the Undertaking, the Bonds or the Resolution, or which are necessary to permit the District to carry out the transactions contemplated by the Preliminary Official Statement and the Official Statement to acquire, construct, operate, maintain, improve and finance the Electric System have been duly obtained or, where required for future performance, are expected to be obtained.

(3) Except as disclosed in the Preliminary Official Statement and the Official Statement, no litigation, action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, regulatory agency, public board or body, is pending or, to the best of knowledge of the officer of the District executing this Contract of Purchase after due investigation, threatened against the District, in any way affecting the corporate existence of the District or the titles of its officers to their respective offices, or affecting or seeking to prohibit, restrain or enjoin the sale, issuance or delivery of any of the Bonds or the collection of the Revenues (as defined in the Resolution) or the Net Revenues (as defined in the Resolution) pledged or to be pledged to pay the principal of and interest on the Bonds, or in any way contesting or affecting as to the District the validity or enforceability of the Act, the Bonds, the Resolution, the

Contract of Purchase, the Escrow Agreement, the Undertaking, or any action of the District contemplated by any of said documents, or contesting the tax exempt status of interest on the Bonds, or which may result in any material adverse change relating to the District, other than routine litigation of the type which normally accompanies its operation of its generation, transmission and distribution system, or contesting the completeness or accuracy of the Preliminary Official Statement or the Official Statement or any supplement or amendment thereto, or contesting the powers of the District or any authority for the issuance of the Bonds, the adoption of the Resolution, or the execution and delivery by the District of the Contract of Purchase, the Escrow Agreement or the Undertaking, nor, to the best of my knowledge, is there any basis for any such action, suit, proceeding, inquiry or investigation wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Act of the authorization, execution, delivery or performance by the District of the Bonds, the Resolution, the Escrow Agreement, the Undertaking, or the Contract of Purchase, or any action of the District contemplated by any of said documents, or which would adversely affect the exclusion from gross income for federal income tax purposes of interest paid on the Bonds, nor to the knowledge of the officer of the District executing this Contract of Purchase is there any basis therefor.

(4) No event affecting the District has occurred (with respect to the Preliminary Official Statement, from its date to the date of the Contract of Purchase, and with respect to the Official Statement, since the date of the Official Statement) which should have been or should be disclosed in the Preliminary Official Statement or the Official Statement so that the Preliminary Official Statement or the Official Statement did not and does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, and which has not been disclosed in a supplement or amendment to the Preliminary Official Statement or the Official Statement.

(5) The District has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the date hereof pursuant to the Contract of Purchase with respect to the issuance of the Bonds.

(6) All capitalized terms employed herein which are not otherwise defined shall have the same meanings as in the Contract of Purchase.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Name:
Title:

Dated: [CLOSING DATE]

**Exhibit E to the Contract of Purchase
(Supplemental Opinion of Bond Counsel)**

[CLOSING DATE]

[TO BE UPDATED]

BofA Securities, Inc.
315 Montgomery Street, 1st Floor
San Francisco, CA 94104

Sacramento Municipal Utility District
Electric Revenue Refunding Bonds, 2024 Series N
(Supplemental Opinion)

Ladies and Gentlemen:

This letter is addressed to you, as Senior Underwriter, pursuant to Section 3(d)(5) of the Contract of Purchase, dated [SALE DATE] (the “Purchase Contract”), between you and the other underwriters named therein and the Sacramento Municipal Utility District (the “District”), providing for the purchase of \$[PAR] aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2024 Series N (the “2024 Series N Bonds”). The 2024 Series N Bonds are being issued pursuant to Resolution No. 6649 of the Board of Directors of the District, adopted January 7, 1971, as supplemented and amended by later resolutions of said Board of Directors (as so supplemented and amended, the “Resolution”), including Resolution No. [RESO NO.], adopted on March 21, 2024. Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Resolution or, if not defined in the Resolution, in the Purchase Contract.

In connection with our role as bond counsel to the District, we have reviewed the Purchase Contract; the Resolution; the Tax Certificate, dated the date hereof (the “Tax Certificate”), executed by the District; certain portions of the posted preliminary official statement of the District, dated [POS DATE] with respect to the 2024 Series N Bonds (the “Preliminary Official Statement”) and of the posted official statement of the District, dated [SALE DATE], with respect to the 2024 Series N Bonds (the “Official Statement”); opinions of counsel to the District and the Trustee; certificates of the District, the Trustee and others; and such other documents, opinions and matters to the extent we deemed necessary to render the opinions and conclusions set forth herein.

The opinions and conclusions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions or conclusions may be affected by actions taken or omitted or events occurring after the original delivery of the 2024 Series N Bonds on the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after the original delivery of the 2024 Series N Bonds on the date hereof. We have assumed the genuineness of all documents and signatures provided to us and the due and legal execution and delivery thereof by, and validity against, any parties other than the District. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. We have further assumed compliance with all covenants and agreements contained in such documents. In addition, we call attention to the fact that the rights and obligations under the 2024 Series N Bonds, the Resolution, the Tax Certificate and the Purchase Contract and their enforceability may be subject to bankruptcy, insolvency, reorganization, receivership, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against governmental entities such as the District in the State of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute or to have the effect of a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinions with respect to the state or quality of title to or interest in any assets described in or as subject to the lien of the Resolution or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such assets. Finally, we undertake no responsibility for the accuracy, except as expressly set forth in numbered paragraph 3 below, completeness or fairness of the Official Statement or other offering material relating to the 2024 Series N Bonds and express no opinion or view with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions and conclusions:

1. The 2024 Series N Bonds are not subject to the registration requirements of the Securities Act of 1933, as amended, and the Resolution is exempt from qualification pursuant to the Trust Indenture Act of 1939, as amended.

2. The Purchase Contract has been duly executed and delivered by, and constitutes a valid and binding obligation of, the District.

3. The statements contained in the Official Statement under the captions "THE 2024 SERIES N BONDS" (excluding information relating to book-entry or The Depository Trust Company), "SECURITY FOR THE BONDS" and "TAX MATTERS" and in APPENDIX D – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION" excluding any material that may be treated as included under such captions by cross-reference or reference to other documents or sources, insofar as such statements expressly summarize certain provisions of the Resolution or set out the content of our final legal opinion as bond counsel to the

District concerning the validity of the 2024 Series N Bonds and certain other matters, dated the date hereof and addressed to the District, are accurate in all material respects.

4. We are not passing upon and do not assume any responsibility for the accuracy, completeness or fairness of any of the statements contained in the Preliminary Official Statement or (except as explicitly stated in paragraph 3 above) in the Official Statement and make no representation that we have independently verified the accuracy, completeness or fairness of any such statements. In our capacity as bond counsel to the District in connection with issuance of the 2024 Series N Bonds, we participated in conferences with your representatives, your counsel, representatives of the District, its counsel, accountants, and others, during which the contents of the Preliminary Official Statement or the Official Statement and related matters were discussed. Based on our participation in the above-mentioned conferences (which, with respect to the Preliminary Official Statement, did not extend beyond the date of the Purchase Contract), and in reliance thereon, on oral and written statements and representations of the District and others and on the records, documents, certificates, opinions and matters herein mentioned, subject to the limitations on our role as bond counsel to the District, we advise you as a matter of fact and not opinion that (a) no facts had come to the attention of the attorneys in our firm rendering legal services with respect to the Preliminary Official Statement which caused us to believe as of the date of the Purchase Contract, based on the documents, drafts and facts in existence and reviewed as of that date, that the Preliminary Official Statement contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (except any information marked as preliminary or subject to change, any information permitted to be omitted by Securities and Exchange Commission Rule 15c2-12 or otherwise left blank and any other differences with the information in the Official Statement), and (b) no facts had come to the attention of the attorneys in our firm rendering legal services with respect to the Official Statement which caused us to believe as of the date of the Official Statement and as of the date hereof that the Official Statement contained or contains any untrue statement of a material fact or omitted or omits to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that, we expressly exclude from the scope of this paragraph and express no view, with respect to both the Preliminary Official Statement and the Official Statement, about any CUSIP numbers, financial, accounting, statistical or economic, engineering or demographic data or forecasts, numbers, charts, tables, graphs, estimates, projections, assumptions or expressions of opinion, any statements about compliance with prior continuing disclosure undertakings, any management discussion and analysis, any information about Cede & Co., The Depository Trust Company or book-entry, ratings, rating agencies, municipal advisors, underwriters, underwriting, verification and the information contained in Appendices B and C included or referred to therein or omitted therefrom. No responsibility is undertaken or conclusion expressed with respect to any other disclosure document, materials or activity, or as to any information from another document or source referred to by or incorporated by reference in the Preliminary Official Statement or the Official Statement.

This letter is furnished by us as bond counsel to the District. No attorney-client relationship has existed or exists between our firm and you in connection with the 2024 Series N Bonds or by virtue of this letter. We disclaim any obligation to update this letter. This letter is delivered to you as Senior Underwriter of the 2024 Series N Bonds, is solely for your benefit as such Senior

Underwriter in connection with the original delivery of the 2024 Series N Bonds on the date hereof, and is not to be used, circulated, quoted or otherwise referred to or relied upon for any other purpose or by any other person. This letter is not intended to, and may not, be relied upon by owners of 2024 Series N Bonds or by any other party to whom it is not specifically addressed.

Very truly yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

Exhibit F to the Contract of Purchase

(Form of Issue Price Certificate Of The Senior Underwriter Regarding Offering Prices)

SACRAMENTO MUNICIPAL UTILITY DISTRICT

[\$[PAR] Electric Revenue Refunding Bonds, 2024 Series N

The undersigned, on behalf of BofA Securities, Inc., as representative (the “Representative”) of itself, Barclays Capital Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities, Inc., Morgan Stanley & Co. LLC, and Wells Fargo Bank, National Association (together, the “Underwriting Group”), hereby certifies, on its own behalf and on behalf of the other members of the Underwriting Group on the basis of representations and warranties set forth in the agreement among underwriters, as set forth below with respect to the sale and issuance of the above-captioned obligations (the “Bonds”).

1. ***Sale of the [General Rule Maturities][Bonds].*** As of the date of this Certificate, for each Maturity of the [General Rule Maturities][Bonds], the first price at which at least 10% of such Maturity was sold to the Public is the respective price listed in Schedule A.

2. ***[Initial Offering Price of the Hold-the-Offering-Price-Maturities.***

(a) The Underwriting Group offered the Hold-the-Offering-Price Maturities to the Public for purchase at the respective initial offering prices listed in Schedule A (the “Initial Offering Prices”) on or before the Sale Date. A copy of the pricing wire or equivalent communication for the Bonds is attached to this Certificate as Schedule B.

(b) As set forth in the Bond Purchase Agreement for the Bonds, the Representative has agreed in writing that, for each Maturity of the Hold-the-Offering-Price Maturities, it would neither offer nor sell any of the unsold Bonds of such Maturity to any person at a price that is higher than the Initial Offering Price for such Maturity during the Holding Period for such Maturity (the “hold-the-offering-price rule”). Pursuant to such agreement, the Representative has not offered or sold any unsold Bonds of any Maturity of the Hold-the-Offering-Price Maturities at a price that is higher than the respective Initial Offering Price for that Maturity of the Bonds during the Holding Period.]

3. ***Defined Terms.***

(a) *[General Rule Maturities* means those Maturities of the Bonds listed in Schedule A hereto as the “General Rule Maturities.”]

(b) *[Hold-the-Offering-Price Maturities* means those Maturities of the Bonds listed in Schedule A hereto as the “Hold-the-Offering-Price Maturities.”]

(c) *[Holding Period* means, with respect to a Hold-the-Offering-Price Maturity, the period starting on the Sale Date and ending on the earlier of (i) the close of the fifth business day after the Sale Date, or (ii) the date on which the Underwriters have sold at least 10% of such Hold-

the-Offering-Price Maturity to the Public at prices that are no higher than the Initial Offering Price for such Hold-the-Offering-Price Maturity.]

(d) *Issuer* means Sacramento Municipal Utility District.

(e) *Maturity* means Bonds with the same credit and payment terms. Bonds with different maturity dates, or Bonds with the same maturity date but different stated interest rates, are treated as separate maturities.

(f) *Public* means any person (including an individual, trust, estate, partnership, association, company, or corporation) other than an Underwriter or a Related Party (as such terms are defined below) to an Underwriter.

(g) A purchaser of any of the Bonds is a *Related Party* to any Underwriter if the Underwriter and the purchaser are subject, directly or indirectly, to (i) at least 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (ii) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (iii) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other).

(h) *Sale Date* means the first day on which there is a binding contract in writing for the sale of a Maturity of the Bonds. The Sale Date of the Bonds is [SALE DATE].

(i) *Underwriter* means (i) any person that agrees pursuant to a written contract with the Issuer (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the Public, and (ii) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (i) of this paragraph to participate in the initial sale of the Bonds to the Public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the Public).

The representations set forth in this certificate are limited to factual matters only, and as it relates to the actions of the other Underwriters, such representations are made to the best of the Representative's knowledge based on the Representative's records. Nothing in this certificate represents the Representative's interpretation of any laws, including specifically Sections 103 and 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations thereunder. The undersigned understands that the foregoing information will be relied upon by the Issuer with respect to certain of the representations set forth in the Tax Certificate and with respect to compliance with the federal income tax rules affecting the Bonds, and by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Issuer, in connection with rendering its opinion that the interest on the Bonds is excluded from gross income for federal income tax purposes, the preparation of the Internal Revenue Service Form 8038-G, and other federal income tax advice that it may give to the Issuer from time to time relating to the Bonds.

Dated: [CLOSING DATE]

BofA Securities, Inc.,
as representative of the Underwriting Group

By: _____

Name: _____

Schedule A

Sale Prices

[\$[PAR] Electric Revenue Refunding Bonds, 2024 Series N

<u>Maturity</u> <u>(1_____1)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Yield</u>	<u>Price</u>	<u>General</u> <u>Rule</u> <u>Maturities</u>	<u>Hold the</u> <u>Offering</u> <u>Price Rule</u> <u>Maturities</u>
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Schedule B

Pricing Wire or Equivalent Communication

Not applicable, because there are no Hold-the-Offering-Price Maturities

Attached

DRAFT PRELIMINARY OFFICIAL STATEMENT

[2024 SERIES M]

PRELIMINARY OFFICIAL STATEMENT DATED [_____] , 2024

NEW ISSUE - FULL BOOK-ENTRY

Ratings: See “RATINGS” herein

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD, based upon an analysis of existing laws, regulations, rulings and court decisions and, assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the 2024 Series M Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. In the further opinion of Bond Counsel, interest on the 2024 Series M Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. Bond Counsel observes that interest on the 2024 Series M Bonds included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2024 Series M Bonds. See “TAX MATTERS.”



**[\$[PRINCIPAL AMOUNT]*
ELECTRIC REVENUE BONDS, 2024 SERIES M
[(GREEN BONDS – CLIMATE BOND CERTIFIED)]**

Dated: Date of Delivery

Due: [_____] , as shown on the inside cover

The Electric Revenue Bonds, 2024 Series M (the “2024 Series M Bonds”) will be issued pursuant to the provisions of Resolution No. 6649 of the Sacramento Municipal Utility District (“SMUD”), as amended and supplemented, and will be payable from the Net Revenues of the Electric System of SMUD, as described herein. The 2024 Series M Bonds are being issued to (i) finance and refinance certain improvements and additions to SMUD’s Electric System, including by paying the outstanding principal amount of SMUD’s commercial paper notes at maturity, [and (ii) pay certain costs associated with the issuance of the 2024 Series M Bonds]. See “PLAN OF FINANCE.”

The 2024 Series M Bonds will mature in the years and amounts as shown on the inside cover. Interest on the 2024 Series M Bonds will accrue at the rates set forth on the inside cover and be payable on [_____, 2024], and semiannually thereafter on each [_____] and [_____].

The 2024 Series M Bonds are subject to redemption prior to maturity as described herein. See “THE 2024 SERIES M BONDS – Redemption Provisions.”

[The 2024 Series M Bonds have been designated as “Green Bonds – Climate Bond Certified.” Kestrel has provided an independent external review and opinion that the 2024 Series M Bonds conform with the Climate Bonds Standard (Version 4.0), and therefore qualify for Climate Bonds designation. See “DESIGNATION OF 2024 SERIES M BONDS AS GREEN BONDS – CLIMATE BOND CERTIFIED” herein and APPENDIX G – “CLIMATE BOND VERIFIER’S REPORT” hereto for more information.]

The 2024 Series M Bonds will be issued in fully registered form and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository (the “Securities Depository”) for the 2024 Series M Bonds. Individual purchases of interests in the 2024 Series M Bonds may be made in book-entry form only, in the principal amount of \$5,000 or any integral multiple thereof. Purchasers of such interests will not receive certificates representing their interests in the 2024 Series M Bonds. Principal and interest are payable directly to the Securities Depository by U.S. Bank Trust Company, National Association, Trustee and Paying Agent. Upon receipt of payments of principal and interest, the Securities Depository will in turn remit such principal and interest to the Securities Depository’s Direct Participants (as such term is herein defined) for subsequent disbursement to the purchasers of interests in the 2024 Series M Bonds, as described herein. See APPENDIX C – “BOOK-ENTRY SYSTEM.”

The principal of and interest on the 2024 Series M Bonds, together with the debt service on other Parity Bonds (as defined herein), are payable exclusively from and secured by a pledge of the Net Revenues of the Electric System of SMUD. Neither the credit nor the taxing power of SMUD or the State of California is pledged to the payment of the 2024 Series M Bonds.

The information presented on this cover page is for general reference only and is qualified in its entirety by reference to the entire Official Statement and the documents summarized and described herein.

The 2024 Series M Bonds are offered when, as and if issued and received by the Underwriters, subject to the approval of the validity of the 2024 Series M Bonds and certain other legal matters by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD. Certain legal matters will be passed on for the Underwriters by their counsel, Nixon Peabody LLP, San Francisco, California. It is expected that the 2024 Series M Bonds will be available for delivery through the facilities of DTC on or about [____], 2024*.

J.P. Morgan

BofA Securities

Barclays

Goldman Sachs & Co. LLC

Morgan Stanley

**Wells Fargo Corporate &
Investment Banking**

[____], 2024

* Preliminary, subject to change.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

[\$[PRINCIPAL AMOUNT]]*
ELECTRIC REVENUE BONDS, 2024 SERIES M

MATURITY SCHEDULE*

Due ([____])	Principal Amount	Interest Rate	Yield	CUSIP [†]
	\$			

\$[____]* ____% Term 2024 Series M Bonds due [____], 20[____]*, Yield ____%, CUSIP[†]: _____

\$[____]* ____% Term 2024 Series M Bonds due [____], 20[____]*, Yield ____%, CUSIP[†]: _____

* Preliminary, subject to change.

† CUSIP[®] is a registered trademark of the American Bankers Association. CUSIP[®] data herein is provided by CUSIP Global Services (CGS), which is managed on behalf of the American Bankers Association by FactSet Research Systems Inc. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP[®] numbers have been assigned by an independent company not affiliated with SMUD or the Underwriters and are included solely for the convenience of the registered owners of the applicable 2024 Series M Bonds. Neither SMUD nor the Underwriters are responsible for the selection or uses of these CUSIP[®] numbers, and no representation is made as to their correctness on the applicable 2024 Series M Bonds or as included herein. The CUSIP[®] number for a specific maturity is subject to being changed after the execution and delivery of the 2024 Series M Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the 2024 Series M Bonds.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

BOARD OF DIRECTORS

Rosanna Herber, President
Gregg Fishman, Vice President
Brandon Rose
Nancy Bui-Thompson
Rob Kerth
Dave Tamayo
Heidi Sanborn

OFFICERS AND EXECUTIVES

Paul Lau, Chief Executive Officer and General Manager
Frankie McDermott, Chief Operating Officer
Scott Martin, Chief Financial Officer
Brandy Bolden, Chief Customer Officer
Suresh Kotha, Chief Information Officer
Jose Bodipo-Memba, Chief Diversity Officer
Laura Lewis, Chief Legal and Government Affairs Officer and General Counsel
Lora Anguay, Chief Zero Carbon Officer
Farres Everly, Chief Marketing & Communications Officer
Russell Mills, Treasurer
Lisa Limcaco, Controller

SPECIAL SERVICES

ORRICK, HERRINGTON & SUTCLIFFE LLP
Bond Counsel

U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION
Trustee and Paying Agent

BAKER TILLY US, LLP, Madison, Wisconsin
Independent Accountants

PFM FINANCIAL ADVISORS LLC, Philadelphia, Pennsylvania
Municipal Advisor

[KESTREL, Hood River, Oregon
Green Bonds External Reviewer]

No dealer, broker, salesperson or other person has been authorized by SMUD or the Underwriters to give any information or to make any representations with respect to the 2024 Series M Bonds other than those contained in this Official Statement and, if given or made, such information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell nor the solicitation of an offer to buy, nor shall there be any sale of the 2024 Series M Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein has been obtained from SMUD and other sources which are believed to be reliable, but it is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation of, the Underwriters. The information and expressions of opinion stated herein are subject to change without notice. The delivery of this Official Statement shall not, under any circumstances, create any implication that there has been no change in the affairs of SMUD since the date hereof. The Underwriters have provided the following sentence for inclusion in this Official Statement: The Underwriters have reviewed the information in this Official Statement in accordance with and as part of their responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

The 2024 Series M Bonds have not been registered under the Securities Act of 1933, as amended, in reliance upon an exemption from the registration requirements contained in such Act. The 2024 Series M Bonds have not been registered or qualified under the securities laws of any state.

CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS IN THIS OFFICIAL STATEMENT

Certain statements included or incorporated by reference in this Official Statement constitute “forward-looking statements.” Such statements generally are identifiable by the terminology used, such as “plan,” “expect,” “estimate,” “budget” or other similar words.

The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements described to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. SMUD does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations or events, conditions or circumstances on which such statements are based occur.

This Official Statement, including any supplement or amendment hereto, is intended to be deposited with the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access website. SMUD maintains a website and social media accounts. However, the information presented therein is not part of this Official Statement and should not be relied upon in making investment decisions with respect to the 2024 Series M Bonds. The references to internet websites in this Official Statement are shown for reference and convenience only; unless explicitly stated to the contrary, the information contained within the websites is not incorporated herein by reference and does not constitute part of this Official Statement.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
PLAN OF FINANCE.....	3
Issuance of 2024 Series M Bonds	3
Issuance of 2024 Series N Bonds and Refunding of Refunded Bonds	3
[DESIGNATION OF 2024 SERIES M BONDS AS GREEN BONDS – CLIMATE BOND CERTIFIED	5
Approved Verifier for Third Party Verification of Climate Bond	7
ESTIMATED SOURCES AND USES OF FUNDS	7
THE 2024 SERIES M BONDS	8
Redemption Provisions	8
DEBT SERVICE SCHEDULE.....	10
SECURITY FOR THE BONDS	10
General.....	10
Consent to Amendments to the Resolution.....	10
Allocation of Revenues.....	11
Rates and Charges.....	12
Limitations on Additional Obligations Payable from Revenues.....	13
SACRAMENTO MUNICIPAL UTILITY DISTRICT	14
ABSENCE OF LITIGATION REGARDING THE 2024 SERIES M BONDS.....	15
UNDERWRITING	15
MUNICIPAL ADVISOR.....	16
APPROVAL OF LEGAL PROCEEDINGS.....	16
FINANCIAL STATEMENTS	17
TAX MATTERS.....	17
CONTINUING DISCLOSURE UNDERTAKING.....	19
RATINGS	20
MISCELLANEOUS	20
APPENDIX A INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT	1
APPENDIX B 2023 AND 2022 CONSOLIDATED FINANCIAL STATEMENTS AND REPORT OF INDEPENDENT ACCOUNTANTS.....	1
APPENDIX C BOOK-ENTRY SYSTEM	1
APPENDIX D SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION.....	1
APPENDIX E PROPOSED FORM OF LEGAL OPINION FOR 2024 SERIES M BONDS	1
APPENDIX F FORM OF CONTINUING DISCLOSURE AGREEMENT	1
[APPENDIX G CLIMATE BOND VERIFIER'S REPORT	G-1

OFFICIAL STATEMENT
Relating to
SACRAMENTO MUNICIPAL UTILITY DISTRICT
[\$[PRINCIPAL AMOUNT]*
ELECTRIC REVENUE BONDS, 2024 SERIES M
INTRODUCTION

This Official Statement, including the cover page and Appendices attached hereto, describes the Sacramento Municipal Utility District (“SMUD”), a political subdivision of the State of California (the “State”), and its \$[PRINCIPAL AMOUNT]* Electric Revenue Bonds, 2024 Series M (the “2024 Series M Bonds”), in connection with the sale by SMUD of the 2024 Series M Bonds. The 2024 Series M Bonds are being issued to (i) finance and refinance certain improvements and additions to SMUD’s Electric System, including by paying the outstanding principal amount of SMUD’s commercial paper notes at maturity, [and (ii) pay certain costs associated with the issuance of the 2024 Series M Bonds]. See “PLAN OF FINANCE.”

The 2024 Series M Bonds are part of an Electric Revenue Bond authorization of SMUD and are issued pursuant to Resolution No. 6649 (the “Master Resolution”) adopted in 1971, as amended and supplemented, and applicable California law, including Article 6a of Chapter 6 of the Municipal Utility District Act (Public Utilities Code Sections 12850 to 12860) (the “Act”), the Revenue Bond Law of 1941 (Government Code Section 54300 *et seq.*) and Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (Government Code Section 53580 *et seq.*). The issuance of the 2024 Series M Bonds was authorized on March 21, 2024, by the Board of Directors of SMUD by a Sixty-Seventh Supplemental Resolution (the “Sixty-Seventh Supplemental Resolution”) supplemental to the Master Resolution. The Master Resolution and all supplemental resolutions, including the Sixty-Seventh Supplemental Resolution, are collectively referred to herein as the “Resolution.” See APPENDIX D — “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION.”

The purchasers of the 2024 Series M Bonds, by virtue of their purchase of the 2024 Series M Bonds, will consent to certain amendments to the Resolution. See “SECURITY FOR THE BONDS – Consent to Amendments to the Resolution.”

The 2024 Series M Bonds and other bonds issued on a parity therewith pursuant to the Resolution are collectively referred to herein as the “Bonds.” The Bonds, together with other Parity Bonds (as defined herein), are payable solely from the Net Revenues of the Electric System. See “SECURITY FOR THE BONDS.” As of December 31, 2023, Bonds in the aggregate principal amount of \$1,783,965,000 were outstanding under the Resolution.

The issuance of the 2024 Series M Bonds is a component of a plan of finance (the “Plan of Finance”) that includes the issuance of SMUD’s Electric Revenue Refunding Bonds, 2024 Series N (the “2024 Series N Bonds”) to refund certain of SMUD’s outstanding Bonds (the “Refunded Bonds”). The issuance of the 2024 Series M Bonds is not contingent upon the implementation of the other components of the Plan of Finance, and SMUD is not obligated to implement any of the components of the Plan of Finance. If the Plan of Finance is implemented in whole, then upon completion of the Plan of Finance,

* Preliminary, subject to change.

Bonds in the aggregate principal amount of \$[_____]* are expected to be outstanding under the Resolution. See “PLAN OF FINANCE.”

Although the Resolution establishes an “Electric Revenue Bond Reserve Fund” (the “Reserve Fund”), the Reserve Fund does *not* secure and will *not* be available to pay debt service on the 2024 Series M Bonds. The Reserve Fund secures all Bonds issued prior to January 1, 2004 that are currently outstanding (and not otherwise deemed to be paid and discharged under the Resolution) and may secure additional Bonds issued in the future.

U.S. Bank Trust Company, National Association serves as trustee and paying agent under the Resolution (in such capacities, the “Trustee” and the “Paying Agent” respectively).

From time to time, SMUD issues Subordinated Electric Revenue Bonds (the “Subordinated Bonds”) pursuant to Resolution No. 85-11-1 of SMUD, adopted on November 7, 1985, as amended and supplemented (the “Subordinate Resolution”). As of December 31, 2023, Subordinated Bonds in the aggregate principal amount of \$332,020,000 were outstanding. The Subordinated Bonds are payable solely from the Net Subordinated Revenues of the Electric System and are subordinate in right of payment to the prior payment of principal of and interest on the Bonds (including the 2024 Series M Bonds).

SMUD also issues commercial paper notes (the “Notes”) from time to time. As of December 31, 2023, Notes in the principal amount of \$150,000,000 were outstanding. Currently, Notes in the aggregate principal amount of \$400,000,000 may be outstanding at any one time, but SMUD reserves the right to increase or decrease the aggregate principal amount of the Notes that may be outstanding at any one time in the future. The Notes are secured by letters of credit issued by commercial banks. The Notes (and SMUD’s obligations to repay drawings under the letters of credit) are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Bonds (including the 2024 Series M Bonds) and the Subordinated Bonds. Drawings under the letters of credit, to the extent not repaid immediately from the proceeds of commercial paper or other available SMUD funds, are repayable with interest over a period of five years. The letters of credit currently expire in August of 2025 and March of 2027. SMUD expects to pay all \$150,000,000 of the outstanding principal amount of the Notes with a portion of the proceeds of the 2024 Series M Bonds. See “PLAN OF FINANCE.”

SMUD has also previously issued its taxable and tax-exempt revolving notes pursuant to a revolving credit agreement with a commercial bank (collectively, the “Revolving Credit Facility”). As of December 31, 2023, no principal amount was outstanding under the Revolving Credit Facility. Currently, the aggregate principal amount that can be outstanding under the Revolving Credit Facility at any one time is limited to \$100,000,000. However, SMUD reserves the right to increase or decrease the aggregate principal amount that can be outstanding at any one time under the Revolving Credit Facility in the future. SMUD’s payment obligations under the Revolving Credit Facility are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Bonds (including the 2024 Series M Bonds) and the Subordinated Bonds. The current term of the Revolving Credit Facility expires in February 2026.

SMUD is responsible for the acquisition, generation, transmission and distribution of electric power to its service area, which includes most of Sacramento County and small portions of Placer and Yolo counties. For the year ended December 31, 2023, SMUD served a population of approximately 1.5 million with a total annual retail load of approximately 10,104 million kilowatt hours (“kWh”). SMUD owns and operates an electric system which, as of December 31, 2023, included generating facilities owned and operated by SMUD with an aggregate generating capacity of approximately 775 megawatts (“MW”), local gas-fired plants owned and operated by a joint powers authority and managed by SMUD

with an aggregate generating capacity of approximately 1,087 MW, over which SMUD has exclusive control of dispatch, and purchased power with an aggregate generating capacity of approximately 1,590 MW and transmission and distribution facilities. SMUD’s power requirements exceed its generating capacity and thus SMUD has agreements with others (including the Local Gas-Fired Plants as defined in APPENDIX A) for the purchase of a portion of its power requirements. See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – POWER SUPPLY AND TRANSMISSION – Power Supply Resources.” Continuing development of SMUD’s business strategy in response to changing environmental and regulatory requirements has had, and is expected to continue to have, a major effect on SMUD’s power supply planning. See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – BUSINESS STRATEGY.”

Pursuant to a Continuing Disclosure Agreement, dated the date of issuance of the 2024 Series M Bonds (the “Continuing Disclosure Agreement”) between SMUD and the Trustee, SMUD will covenant for the benefit for the holders of the 2024 Series M Bonds and owners of beneficial interest in the 2024 Series M Bonds to provide certain financial information and operating data and to provide certain notices. See “CONTINUING DISCLOSURE UNDERTAKING” and APPENDIX F – “FORM OF CONTINUING DISCLOSURE AGREEMENT.”

The information presented in this Introduction is qualified in its entirety by reference to this entire Official Statement and the documents summarized or described herein. This Official Statement, including the Appendices, summarizes the terms of the 2024 Series M Bonds, the Resolution and certain agreements, contracts and other arrangements, some of which currently exist and others of which may exist in the future. The summaries of and references to all documents, statutes, regulations and other instruments referred to herein do not purport to be complete, comprehensive or definitive, and each such summary and reference is qualified in its entirety by reference to each such document, statute, regulation or instrument.

Capitalized terms not otherwise defined in this Official Statement shall have the meanings ascribed thereto in APPENDIX D – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Certain Definitions” or in the Resolution.

PLAN OF FINANCE

Issuance of 2024 Series M Bonds

The proceeds of the 2024 Series M Bonds will be used to (i) finance and refinance certain improvements and additions to SMUD’s Electric System, including by paying the outstanding principal amount of SMUD’s commercial paper notes at maturity, [and (ii) pay certain costs associated with the issuance of the 2024 Series M Bonds]. The issuance of the 2024 Series M Bonds is a component of the Plan of Finance, as further described below. The issuance of the 2024 Series M Bonds is not contingent upon the implementation of the other components of the Plan of Finance, and SMUD is not obligated to implement any of the components of the Plan of Finance.

Issuance of 2024 Series N Bonds and Refunding of Refunded Bonds

Concurrently with the issuance of the 2024 Series M Bonds, SMUD expects to issue approximately \$[_____] * aggregate principal amount of the 2024 Series N Bonds to (i) refund the

* Preliminary, subject to change.

\$200,000,000 outstanding principal amount of the Sacramento Municipal Utility District Electric Revenue Bonds, 2009 Series V (the “2009 Series V Bonds”), (ii) refund the \$250,000,000 outstanding principal amount of the Sacramento Municipal Utility District Electric Revenue Bonds, 2010 Series W (the “2010 Series W Bonds” and, together with the 2009 Series V Bonds, the “Refunded Bonds”) [and (iii) pay certain costs associated with the issuance of the 2024 Series N Bonds].

The Refunded Bonds were issued as bonds designated as “Build America Bonds” under the provisions of the American Recovery and Reinvestment Act of 2009 (the “Recovery Act”). At the time the Refunded Bonds were issued, SMUD expected to receive cash subsidy payments from the United States Treasury equal to 35% of the interest payable on the Refunded Bonds as required by sections 54AA and 6431 of the Internal Revenue Code of 1986, as amended (the “Code”) (as such sections were added to the Code by the Recovery Act). However, as a result of the enactment of the Budget Control Act of 2011 (the “Budget Control Act”) and the American Taxpayer Relief Act of 2012 (the “Taxpayer Relief Act”) the subsidy payments for the Refunded Bonds became subject to sequestration and have been reduced to an amount less than 35% of the interest payable on the Refunded Bonds as originally required by sections 54AA and 6431 of the Code. See also APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Build America Bonds Subsidy Payments.*”

The 2009 Series V Bonds are subject to extraordinary optional redemption upon the occurrence of an “Extraordinary Event.” Pursuant to the extraordinary optional redemption provisions for the 2009 Series V Bonds, an “Extraordinary Event” will have occurred if SMUD determines that a material adverse change has occurred to Section 54AA or 6431 of the Code (as such Sections were added by Section 1531 of the Recovery Act, pertaining to Build America Bonds) or there is any guidance published by the Internal Revenue Service or the United States Treasury with respect to such Sections or any other determination by the Internal Revenue Service or the United States Treasury, which determination is not the result of an act or omission by SMUD to satisfy the requirements to receive the 35% cash subsidy payment from the United States Treasury, pursuant to which SMUD’s 35% cash subsidy payment from the United States Treasury is reduced or eliminated.

The 2010 Series W Bonds are subject to extraordinary optional redemption upon the occurrence of a “Tax Law Change.” Pursuant to the extraordinary optional redemption provisions for the 2010 Bonds, “Tax Law Change” means legislation has been enacted by the Congress of the United States or passed by either House of the Congress, or a decision has been rendered by a court of the United States, or an order, ruling, regulation (final, temporary or proposed) or official statement has been made by or on behalf of the Treasury Department of the United States, the Internal Revenue Service or other governmental agency of appropriate jurisdiction, the effect of which, as reasonably determined by SMUD, would be to suspend, reduce or terminate the payment from the United States Treasury to SMUD with respect to the 2010 Series W Bonds, or to state or local government issuers generally with respect to obligations of the general character of the 2010 Series W Bonds, pursuant to Sections 54AA or 6431 of the Code of an amount equal to 35% of the interest due thereon on each interest payment date (the “Subsidy Payments”); provided, that such suspension, reduction or termination of the Subsidy Payments is not due to a failure by the District to comply with the requirements under the Code to receive such Subsidy Payments.

The extraordinary optional redemption provisions for each series of the Refunded Bonds are described in the related Official Statement for such series of Refunded Bonds. The Official Statements for the Refunded Bonds can be found at the following links:

2009 Series V Bonds: <https://emma.msrb.org/EP520561-EP406639-EP803941.pdf>

2010 Series W Bonds: <https://emma.msrb.org/EA393164-EA308929-EA704612.pdf>

The foregoing links are provided for reference and convenience only. The Official Statements for the Refunded Bonds are not incorporated herein by reference and do not constitute part of this Official Statement.

For various reasons, including but not limited to, the enactment of the Budget Control Act and the Taxpayer Relief Act and the resulting reduction of the cash subsidy payments required to be paid by the United States Treasury to SMUD with respect to the Refunded Bonds pursuant to section 6431 of the Code, SMUD has determined that an “Extraordinary Event” has occurred with respect to the 2009 Series V Bonds and that a “Tax Law Change” has occurred with respect to the 2010 Series W Bonds. Therefore, SMUD expects to redeem the Refunded Bonds pursuant to the extraordinary optional redemption provisions applicable to each series of the Refunded Bonds.

[If the 2024 Series N Bonds are issued, then a portion of the proceeds of the 2024 Series N Bonds, [together with other available funds], will be deposited in one or more escrow funds (the “Escrow Funds”) established under one or more escrow agreements between SMUD and the Trustee. The moneys so deposited will be invested in direct obligations of the United States of America (the “Federal Securities”), the interest on and principal of which, together with other moneys held in the Escrow Funds, are expected to be in an amount sufficient to pay the interest on the Refunded Bonds due on [_____] (the “Redemption Date”) and to redeem the Refunded Bonds on the Redemption Date at their respective redemption prices. [Upon deposit, all liability of SMUD with respect to the Refunded Bonds (except for the obligation of SMUD to pay the interest on and redemption price of the Refunded Bonds from moneys on deposit in the Escrow Fund) will cease. The holders of the Refunded Bonds will be entitled to payment from SMUD solely from moneys or Federal Securities on deposit in the Escrow Fund, and the Refunded Bonds will no longer be outstanding under the Resolution.] [Notwithstanding the deposit to the Escrow Funds, the Refunded Bonds will remain outstanding, and SMUD will remain liable for the payment of the principal and redemption price of and interest on the Refunded Bonds, until the Refunded Bonds are actually redeemed in full on the Redemption Date.] The Federal Securities and moneys in the Escrow Funds will not secure the 2024 Series M Bonds and will not be available to pay the principal of or interest on the 2024 Series M Bonds.]

[If the 2024 Series N Bonds are issued, then a portion of the proceeds of the 2024 Series N Bonds, [together with other available funds], will be used to pay the interest on the Refunded Bonds due on [_____] (the “Redemption Date”) and to redeem the Refunded Bonds on the Redemption Date at their respective redemption prices.]

[DESIGNATION OF 2024 SERIES M BONDS AS GREEN BONDS – CLIMATE BOND CERTIFIED

The information set forth below concerning (1) the Climate Bonds Initiative (“CBI”) and the process for obtaining certification from CBI, and (2) Kestrel in its role as a verifier with respect to the certification of the 2024 Series M Bonds as Climate Bond Certified, all as more fully described below, has been extracted from materials provided by CBI and Kestrel and neither SMUD nor the Underwriters undertake any responsibility for the accuracy or completeness of any such information. Additional information relating to CBI and the certification process can be found at www.climatebonds.net. The CBI website is included for reference only and the information contained therein is not incorporated by reference in this Official Statement. Neither SMUD nor the Underwriters make any representation regarding the applicability or suitability of the certification of the 2024 Series M Bonds as Climate Bond Certified.

In connection with the 2024 Series M Bonds and the improvements and additions to SMUD's Electric System to be financed and refinanced with the proceeds of the 2024 Series M Bonds (the "Projects"), SMUD applied to CBI for designation of the 2024 Series M Bonds as "Climate Bond Certified." CBI is an independent not-for-profit organization that works solely on mobilizing the bond market for climate change solutions. CBI has established a certification program that provides criteria for eligible projects to be considered a "Certified Climate Bond." Rigorous scientific criteria ensure that financed activities are consistent with the 1.5 degrees Celsius warming target declared in the 2015 Paris Agreement which exists within the United Nations Framework Convention on Climate Change, to address greenhouse-gas-emissions mitigation, adaptation, and finance. The CBI certification program is used globally by bond issuers, governments, investors and the financial markets to prioritize investments which genuinely contribute to addressing climate change.

The CBI standards use credible, science-based, widely supported guidelines about what should and should not be considered a qualifying climate-aligned investment to assist investors in making informed decisions about the environmental credentials of a bond. In order to receive the CBI certification, SMUD engaged Kestrel, a third-party CBI Approved Verifier, to provide verification to the CBI Certification Board that the 2024 Series M Bonds meet the CBI standards and relevant sector criteria. Kestrel reviewed and provided verification to CBI, and CBI certified the 2024 Series M Bonds as Climate Bonds on [____]. Kestrel will also provide a Post-Issuance Report to CBI as to whether the proceeds of the 2024 Series M Bonds have been allocated properly.

Per the International Capital Market Association (the "ICMA"), Green Bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the Green Bond Principles. The four core components are: 1. Use of Proceeds; 2. Process for Project Evaluation and Selection; 3. Management of Proceeds; and 4. Reporting.

Kestrel has also determined that the 2024 Series M Bonds are in conformance with the four core components of the ICMA Green Bond Principles.

The terms "Climate Bond Certified" and "Green Bonds" are neither defined in nor related to the Master Indenture or the Sixty-Seventh Supplemental Resolution. The use of such terms in this Official Statement are solely for identification purposes and are not intended to provide or imply that the owners of the 2024 Series M Bonds are entitled to any security other than as provided in the Master Resolution and the Sixty-Seventh Supplemental Resolution, as described under the heading "SECURITY FOR THE BONDS."

The certification of the 2024 Series M Bonds as Climate Bonds by the Climate Bonds Initiative is based solely on the Climate Bond Standard and does not, and is not intended to, make any representation or give any assurance with respect to any other matter relating to the 2024 Series M Bonds or the Projects, including but not limited to this Official Statement, the transaction documents, SMUD or the management of SMUD.

The certification of the 2024 Series M Bonds as Climate Bonds by the Climate Bonds Initiative was addressed solely to SMUD and is not a recommendation to any person to purchase, hold or sell the 2024 Series M Bonds and such certification does not address the market price or suitability of the 2024 Series M Bonds for a particular investor. The certification also does not address the merits of the decision by SMUD or any third party to participate in any nominated project and does not express and should not be deemed to be an expression of an opinion as to SMUD or any aspect of the Projects (including but not limited to the financial viability of the Projects) other than with respect to conformance with CBI's standards for Certified Climate Bonds.

In issuing or monitoring, as applicable, the certification, CBI and Kestrel have assumed and relied upon and will assume and rely upon the accuracy and completeness in all material respects of the information supplied or otherwise made available to CBI and Kestrel. CBI does not assume or accept any responsibility to any person for independently verifying (and it has not verified) such information or to undertake (and it has not undertaken) any independent evaluation of any nominated project or SMUD.

In addition, CBI does not assume any obligation to conduct (and it has not conducted) any physical inspection of any nominated project. The certification may only be used with the 2024 Series M Bonds and may not be used for any other purpose without CBI’s prior written consent.

The certification does not and is not in any way intended to address the likelihood of timely payment of interest when due on the 2024 Series M Bonds and/or the payment of principal at maturity or any other date.

The certification may be withdrawn at any time in the Climate Bonds Initiative’s sole and absolute discretion and there can be no assurance that such certification will not be withdrawn.

Approved Verifier for Third Party Verification of Climate Bond

SMUD has engaged Kestrel to provide a Verification on the 2024 Series M Bonds’ conformance with the Climate Bond Standard V4.0. Kestrel has determined that the projects and activities to be financed with the proceeds of the 2024 Series M Bonds satisfy the Climate Bond Standard V4.0 and the Electrical Grids and Storage Criteria (Version 1.0). Accredited as an “Approved Verifier” by the Climate Bonds Initiative, Kestrel evaluates bonds against the Climate Bonds Initiative Standards and Criteria in all sectors worldwide. Kestrel’s Climate Bond Verifier’s Report is attached as APPENDIX G hereto.

Kestrel’s Climate Bond Verifier’s Report reflects only the views of Kestrel. Any explanation of the significance of Kestrel’s Climate Bond Verifier’s Report may be obtained from Kestrel. Neither SMUD nor the Underwriters undertake any responsibility for the accuracy or completeness of the information contained in Kestrel’s Climate Bond Verifier’s Report. SMUD will not be required to file additional information regarding the Projects with the MSRB through EMMA (as such terms are defined herein) in the future.]

ESTIMATED SOURCES AND USES OF FUNDS

The estimated sources and uses of funds with respect to the 2024 Series M Bonds are as follows:

Sources of Funds:

Principal Amount	\$
[Net] Original Issue [Premium/Discount]	
SMUD Contribution	
Total Sources of Funds	\$

Uses of Funds:

Payment of Notes	\$
Reimbursable Capital	
Costs of Issuance (including Underwriters’ Discount)	
Total Uses of Funds	\$

THE 2024 SERIES M BONDS

The 2024 Series M Bonds will mature in the years and amounts and bear interest at the rates set forth on the inside cover page hereof. Interest on the 2024 Series M Bonds will accrue from the date of delivery of the 2024 Series M Bonds, and will be payable on [_____, 2024], and semiannually thereafter on each [_____] and [_____] (each, an “Interest Payment Date”) to the owners thereof as of the first day of the month (whether or not such day is a Business Day) in which an Interest Payment Date occurs (each, a “Record Date”).

The 2024 Series M Bonds will be issued in fully registered form and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository (the “Securities Depository”) for the 2024 Series M Bonds. Individual purchases of interests in the 2024 Series M Bonds will be made in book-entry form only, in the principal amount of \$5,000 or any integral multiple thereof. Purchasers of such interests will not receive certificates representing their interests in the 2024 Series M Bonds. Principal and interest are payable directly to the Securities Depository by the Trustee. Upon receipt of payments of principal and interest, the Securities Depository will in turn remit such principal and interest to the Securities Depository’s Direct Participants (as such term is hereinafter defined) for subsequent disbursement to the purchasers of interests in the 2024 Series M Bonds. See APPENDIX C – “BOOK-ENTRY SYSTEM.”

Redemption Provisions*

Optional Redemption. On any date on or after [_____] , 20__ , the 2024 Series M Bonds maturing on and after [_____] , 20__ are subject to redemption prior to their stated maturities at the option of SMUD, from any source of available funds, as a whole or in part, by lot, at the principal amount thereof, without premium, together with accrued interest to the date fixed for redemption.

Mandatory Redemption. The 2024 Series M Bonds maturing on [_____] , 20__ , are subject to mandatory redemption prior to maturity, in part, by lot, from sinking fund payments required for the 2024 Series M Bonds by the Sixty-Seventh Supplemental Resolution at the principal amount thereof together with the accrued interest thereon to the date fixed for redemption, without premium, as shown below:

Sinking Fund Payment Dates ([_____])	Principal Amount
†	\$

† Maturity.

The 2024 Series M Bonds maturing on [_____] , 20__ , are subject to mandatory redemption prior to maturity, in part, by lot, from sinking fund payments required for the 2024 Series M Bonds by the Sixty-Seventh Supplemental Resolution at the principal amount thereof together with the accrued interest thereon to the date fixed for redemption, without premium, as shown below:

* Preliminary, subject to change.

Sinking Fund Payment Dates ([])	Principal Amount
†	\$

† Maturity.

Selection of Bonds for Redemption. If less than all of a maturity of the 2024 Series M Bonds is to be redeemed, the Trustee shall select the 2024 Series M Bonds of such maturity to be redeemed, from the Outstanding 2024 Series M Bonds of such maturity not previously called for redemption, by lot in any manner the Trustee deems fair. For so long as the book-entry only system is in effect with respect to the 2024 Series M Bonds, DTC shall select the 2024 Series M Bonds to be redeemed in accordance with the procedures of DTC.

Notice of Redemption. Notice of redemption for the 2024 Series M Bonds will be given by publication at least once in financial newspapers or journals, selected by the Trustee, of general circulation in San Francisco, California, Chicago, Illinois, and New York, New York, each such publication to be not less than 20 nor more than 60 days before the date fixed for redemption, if at any time the 2024 Series M Bonds are not in book entry form. Notice also will be mailed to the registered owners of any 2024 Series M Bonds designated for redemption, but failure to mail such notice or any defect therein with respect to any particular 2024 Series M Bond will not affect the validity of the proceedings for the redemption of any other 2024 Series M Bonds. For so long as the book-entry-only system is in effect with respect to the 2024 Series M Bonds, the Trustee will mail notice of redemption solely to DTC or its nominee or its successor. Any failure of DTC or its successor, or of a direct or indirect DTC participant, to notify a beneficial owner of a 2024 Series M Bond of any redemption will not affect the sufficiency or validity of the redemption of any 2024 Series M Bond. See APPENDIX C – “BOOK-ENTRY SYSTEM.” SMUD may instruct the Trustee to give conditional notice of optional redemption, which may be conditioned upon the receipt of moneys or any other event.

DEBT SERVICE SCHEDULE

The following table sets forth the debt service requirements with respect to the 2024 Series M Bonds. See also APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Debt Service Requirements*.”

Calendar Year	Principal	Interest	Total
	\$	\$	\$
	\$	\$	\$

SECURITY FOR THE BONDS

General

The principal of and premium, if any, and interest on the Bonds, together with other Parity Bonds, are payable exclusively from, and are secured by a pledge (effected in the manner and to the extent provided in the Resolution) of, the Net Revenues of the Electric System of SMUD.

Neither the credit nor the taxing power of SMUD is pledged to the payment of the Bonds and the general fund of SMUD is not liable for the payment thereof. The owners of the Bonds cannot compel the exercise of any taxing power of SMUD or the forfeiture of any of its property. The Bonds are not a legal or equitable pledge, charge, lien or encumbrance upon any of SMUD’s property (including the Electric System) or upon any of its income, receipts or revenues except the Net Revenues of the Electric System to the extent of the pledge thereof contained in the Resolution.

Consent to Amendments to the Resolution

The purchasers of the 2024 Series M Bonds, by virtue of their purchase of the 2024 Series M Bonds, will consent to certain amendments to the Resolution (the “Proposed Amendments”). Such amendments are described in *bold italic* font herein under “SECURITY FOR THE BONDS – Rates and Charges” and “ – Limitations on Additional Obligations Payable from Revenues” and in APPENDIX D – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Certain Definitions” and “ – Reserve Fund for Certain Bonds.” The written consents to the Proposed Amendments of the holders and registered owners of at least 60% of the Bonds outstanding have been filed with SMUD or the Trustee, as required by the Resolution. However, while certain Bonds remain outstanding, SMUD must also obtain the written consents of certain bond insurers to implement the Proposed Amendments. SMUD expects to implement the Proposed Amendments when the written consents of such bond insurers are obtained or

when the Bonds insured by such bond insurers are no longer outstanding. The final maturity date of the insured Bonds is July 1, 2024.

Allocation of Revenues

After making an allocation of Revenues to Maintenance and Operation Costs and to Energy Payments not included in Maintenance and Operation Costs, the Treasurer of SMUD is required (subject to the last paragraph of this section) to set aside, on an equal priority with sums set aside for all other Parity Bonds, Net Revenues as follows:

First: To the Electric Revenue Bond Interest Fund, in approximately equal monthly installments on or before the first day of each month, an amount equal to at least one-fifth (1/5) of the aggregate amount of interest becoming due on the Bonds on the next succeeding semiannual interest payment date, until an amount sufficient to meet said interest payment is accumulated.

Second: To the Electric Revenue Bond Redemption Fund, to be set aside in the Principal Account and Sinking Fund, respectively, in approximately equal monthly installments on or before the first day of each month, an amount equal to at least one-tenth (1/10) of the aggregate amount of principal becoming due on serial Bonds and the aggregate minimum sinking fund payments required to be made with respect to term Bonds during the next ensuing 12 months, until an amount sufficient to meet the principal and sinking fund requirements on all Bonds outstanding is accumulated in said accounts, respectively.

Third: To the Electric Revenue Bond Reserve Fund, such amounts as any supplemental resolution authorizing the issuance of a series of Bonds may require to build up and maintain said fund.

If interest on Bonds of a series or maturity is payable more frequently than semiannually, the Treasurer of SMUD shall set aside out of Net Revenues in the Interest Fund such amounts as may be required to pay interest on the Bonds of such series or maturity on each interest payment date at least one month prior to such interest payment date. Allocation to the Electric Revenue Bond Redemption Fund and Electric Revenue Bond Reserve Fund shall be made as set forth above.

All remaining Revenues, after making the foregoing allocations, will be available to SMUD for all lawful SMUD purposes.

From time to time, SMUD may deposit in the Rate Stabilization Fund from such remaining Revenues such amounts as SMUD shall determine, provided that deposits in the Rate Stabilization Fund from remaining Revenues in any fiscal year may be made until (but not after) the date 120 days after the end of such fiscal year. SMUD may withdraw amounts from the Rate Stabilization Fund only for inclusion in Revenues for any fiscal year, such withdrawals to be made until (but not after) 120 days after the end of such fiscal year. All interest or other earnings upon deposits in the Rate Stabilization Fund shall be withdrawn therefrom and accounted for as Revenues. No deposit of Revenues to the Rate Stabilization Fund may be made to the extent such Revenues were included in any certificate submitted in connection with the issuance of additional bonds and withdrawal of the Revenues from the Revenues employed in rendering said certificate would have caused noncompliance with the additional bond provisions or to the extent withdrawals of the Revenues for any fiscal year would have reduced the debt

service ratio for such fiscal year to or below 1.40:1.00. See APPENDIX A – “RATES AND CUSTOMER BASE – Rates and Charges” for a description of the balance in the Rate Stabilization Fund.

With respect to Bonds of a series issued on or after October 1, 2003 (including the 2024 Series M Bonds), notwithstanding the foregoing, so long as the Bonds of such series or maturity are outstanding, the supplemental resolution authorizing the issuance of such series shall require the Treasurer, out of Net Revenues received by SMUD, to set aside in the Interest Fund and the Principal Account, respectively, such amounts as may be required so that an amount equal to the amount of principal and/or interest becoming due and payable on the Bonds of such series or maturity on each interest payment date and principal payment date is on deposit in the Interest Fund and the Principal Account, respectively, at such time on or prior to such interest payment date or principal payment date as shall be specified in the supplemental resolution authorizing such Bonds.

Rates and Charges

SMUD has covenanted in the Resolution to establish and at all times maintain and collect rates and charges for the sale or use of electric energy generated, transmitted, distributed or furnished by SMUD which, together with certain items of other income permitted under the Resolution, will yield Revenues at least sufficient, with respect to the ensuing 12 months, to pay and provide for all sums required for Maintenance and Operation Costs and Energy Payments not included in Maintenance and Operation Costs and, in addition, to provide an aggregate sum equal to at least 1.20 times the total amount required for the payment of principal and interest, together with any sinking fund or reserve fund payments, on the Bonds and all Parity Bonds, in each case during such 12 months.

For purposes of the calculations of payments to be made pursuant to the Resolution, the interest rates on Parity Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Parity Bonds bear a rate or rates of interest for a known period or periods of time, such rate or rates of interest for such period or periods and thereafter, for the portion of the calculation period not covered by such known period or periods, the Assumed Interest Rate.

For purposes of the above calculations of principal of and interest on Parity Bonds, if a Financial Products Agreement has been entered into by SMUD with respect to any Parity Bonds, interest on such Parity Bonds shall be included in the calculation of such principal and interest by including for each fiscal year or period an amount equal to the amount of interest payable on such Parity Bonds in such fiscal year or period at the rate or rates stated in such Parity Bonds plus any Financial Product Payments payable in such fiscal year or period minus any Financial Product Receipts receivable in such fiscal year or period; provided that in no event shall any calculation made pursuant to this clause result in a number less than zero being included in the calculation of such principal and interest.

For purposes of the above calculations of principal of and interest on Parity Bonds, Excluded Principal Payments shall be disregarded (but interest on the Parity Bonds to which such Excluded Principal Payments relate shall be included until but not after the stated due date when principal payments on such Parity Bonds are scheduled by their terms to commence) and Assumed Principal Payments and Assumed Interest Payments shall be included; and for purposes of the above calculations of interest on Parity Bonds, the interest rates on Parity Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Parity Bonds bear a rate or rates of interest for a known period or periods of time, such rate or rates of interest for such period or periods and thereafter, for the portion of the calculation period not covered by such known period or periods, the Assumed Interest Rate.

SMUD has full power to establish rates and charges for all SMUD services, and the levels of such rates are not subject to review or regulation by any other governmental agency, either federal or state.

For purposes of the calculations specified in this section: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that SMUD receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by SMUD with respect to or in connection with such Parity Bonds during such period of time.

See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Build America Bonds Subsidy Payments*” for a description of the current Subsidy that SMUD receives with respect to the Refunded Bonds.

See APPENDIX D hereto for the definitions of certain capitalized terms used in this section.

Limitations on Additional Obligations Payable from Revenues

The Resolution provides that SMUD will not, so long as any Bonds are outstanding, issue any obligations payable in whole or in part from Revenues except the following:

1. Refunding bonds issued solely to refund all or part of the Bonds or Parity Bonds;
2. General obligation bonds or other securities secured by the full faith and credit of SMUD;
3. Additional revenue bonds (including additional Bonds under the Resolution and additional Parity Bonds), payable on a parity with the Bonds, with an equal lien and charge upon the Revenues, but only subject to the following conditions:

(a) Such additional revenue bonds shall have been authorized for and the proceeds therefrom required to be applied to additions, betterments, extensions or improvements to the Electric System (and necessary costs of issuance, interest during construction and reserve funds);

(b) The proceedings for the issuance of such additional revenue bonds shall require SMUD to fix and collect rates and charges in an amount not less, with respect to such bonds, than the amounts required with respect to Bonds issued under the Resolution;

(c) SMUD shall not then be in default under the Resolution or other resolutions authorizing the issuance of Parity Bonds; and

(d) The Trustee shall receive a certificate of SMUD to the effect (i) that Net Revenues, after completion of the improvements proposed to be financed by such additional revenue bonds, will be sufficient to pay the principal of and interest (and bond reserve fund requirements) on all Bonds and Parity Bonds then outstanding and on such additional revenue bonds; and (ii) that for a period of 12 consecutive months during the 24 months immediately preceding the issuance of the additional revenue bonds the Net Revenues have been at least equal to 1.25 times maximum annual debt service on all Bonds and Parity Bonds then outstanding and on such additional revenue bonds (after adjusting Net Revenues to include 75 percent of the estimated additional Net Revenues to be derived from an increase in rates and charges or from the acquisition of an existing revenue producing electric system); and

4. Revenue bonds junior and subordinate to the Bonds and Parity Bonds.

For purposes of the above calculations, Excluded Principal Payments shall be disregarded (but interest on the Parity Bonds to which such Excluded Principal Payments relate shall be included until but not after the stated due date when principal payments on such Parity Bonds are scheduled by their terms to commence) and Assumed Principal Payments and Assumed Interest Payments shall be included; and for purposes of the above calculations of interest on Parity Bonds, the interest rates on Parity Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Parity Bonds bear a rate or rates of interest for a known period or periods of time, such rate or rates of interest for such period or periods and thereafter, for the portion of the calculation period not covered by such known period or periods, the Assumed Interest Rate.

For purposes of the above calculations of principal of and interest on Parity Bonds, if a Financial Products Agreement has been entered into by SMUD with respect to any Parity Bonds, interest on such Parity Bonds shall be included in the calculation of such principal and interest by including for each fiscal year or period an amount equal to the amount of interest payable on such Parity Bonds in such fiscal year or period at the rate or rates stated in such Parity Bonds plus any Financial Product Payments payable in such fiscal year or period minus any Financial Product Receipts receivable in such fiscal year or period; provided that in no event shall any calculation made pursuant to this clause result in a number less than zero being included in the calculation of such principal and interest.

For purposes of the calculations specified in this section: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that SMUD receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by SMUD with respect to or in connection with such Parity Bonds during such period of time.

See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Estimated Capital Requirements” for a description of SMUD’s projected capital requirements. Such capital requirements may be satisfied through the issuance of additional Bonds or Parity Bonds.

See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Build America Bonds Subsidy Payments*” for a description of the current Subsidy that SMUD receives with respect to the Refunded Bonds.

See APPENDIX D hereto for the definitions of certain capitalized terms used in this section.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

SMUD owns and operates an electric system that has provided retail electric service since 1946. SMUD’s current service area is approximately 900 square miles, and includes the principal parts of Sacramento County and small portions of Placer and Yolo counties. For a full description of SMUD, its history, organization, operations, and financial performance, certain developments in the energy markets, certain factors affecting the electric utility industry, including impacts from the COVID-19 pandemic, and certain regulatory and other matters, see APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT.”

ABSENCE OF LITIGATION REGARDING THE 2024 SERIES M BONDS

SMUD is not aware of any action, suit or proceeding, threatened or pending, to restrain or enjoin the issuance, sale or delivery of the 2024 Series M Bonds, or in any way contesting or affecting the validity of the 2024 Series M Bonds or any of the proceedings of SMUD taken with respect to the 2024 Series M Bonds. SMUD is not aware of any action, suit or proceeding, threatened or pending, questioning the corporate existence of SMUD, or the title of the officers of SMUD to their respective offices, or the power and authority of SMUD to execute and deliver the 2024 Series M Bonds. For a description of certain litigation in which SMUD is involved, see APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – LEGAL PROCEEDINGS.”

UNDERWRITING

J.P. Morgan Securities LLC (“JPMS”), as representative of itself, BofA Securities, Inc. (“BofA”), Barclays Capital Inc., Goldman Sachs & Co. LLC, Morgan Stanley & Co. LLC and Wells Fargo Bank, National Association (each, an “Underwriter” and, collectively, the “Underwriters”) have jointly and severally agreed, subject to certain customary conditions to closing, to purchase the 2024 Series M Bonds from SMUD at an aggregate purchase price of \$_____ (being the aggregate principal amount of the 2024 Series M Bonds, [plus/less] [net] original issue [premium/discount] of \$_____, and less Underwriters’ discount of \$_____). The Underwriters will be obligated to purchase all 2024 Series M Bonds if any 2024 Series M Bonds are purchased. The Underwriters have agreed to make a public offering of the 2024 Series M Bonds at the initial offering prices set forth on the inside cover page hereof. The 2024 Series M Bonds may be offered and sold to certain dealers (including underwriters and other dealers depositing such bonds into investment trusts) at prices lower than such public offering prices, and such public offering prices may be changed, from time to time, by the Underwriters.

BofA, an Underwriter, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated (“MLPF&S”). As part of this arrangement, BofA may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA may compensate MLPF&S as a dealer for its selling efforts with respect to the 2024 Series M Bonds.

JPMS, one of the Underwriters of the 2024 Series M Bonds, has entered into negotiated dealer agreements (each, a “Dealer Agreement”) with each of Charles Schwab & Co., Inc. (“CS&Co.”) and LPL Financial LLC (“LPL”) for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement, each of CS&Co. and LPL may purchase 2024 Series M Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any 2024 Series M Bonds that such firm sells.

Morgan Stanley & Co. LLC., an Underwriter of the 2024 Series M Bonds, has entered into a retail distribution arrangement with its affiliate Morgan Stanley Smith Barney LLC. As part of the distribution arrangement, Morgan Stanley & Co. LLC may distribute municipal securities to retail investors through the financial advisor network of Morgan Stanley Smith Barney LLC. As part of this arrangement, Morgan Stanley & Co. LLC may compensate Morgan Stanley Smith Barney LLC for its selling efforts with respect to the 2024 Series M Bonds.

[Wells Fargo Corporate & Investment Banking (which may be referred to elsewhere as “CIB,” “Wells Fargo Securities” or “WFS”) is the trade name used for the corporate banking, capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including Wells Fargo Bank, National Association (“WFBNA”), a member of NFA, which conducts its municipal securities sales, trading and underwriting operations through the Wells Fargo Bank, N.A. Municipal Finance Group,

a separately identifiable department of WFBNA, registered with the U.S. Securities and Exchange Commission as a municipal securities dealer pursuant to Section 15B(a) of the Securities Exchange Act of 1934.]

[WFBNA, acting through its Municipal Finance Group, one of the Underwriters of the 2024 Series M Bonds, has entered into an agreement (the “WFA Distribution Agreement”) with its affiliate, Wells Fargo Clearing Services, LLC (which uses the trade name “Wells Fargo Advisors”) (“WFA”), for the distribution of certain municipal securities offerings, including the 2024 Series M Bonds. Pursuant to the WFA Distribution Agreement, WFBNA will share a portion of its underwriting compensation with respect to the 2024 Series M Bonds with WFA. WFBNA has also entered into an agreement (the “WFSLLC Distribution Agreement”) with its affiliate Wells Fargo Securities, LLC (“WFSLLC”), for the distribution of municipal securities offerings, including the 2024 Series M Bonds. Pursuant to the WFSLLC Distribution Agreement, WFBNA pays a portion of WFSLLC’s expenses based on its municipal securities transactions. WFBNA, WFSLLC, and WFA are each wholly-owned subsidiaries of Wells Fargo & Company.]

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for SMUD for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of, or issued for the benefit of, SMUD.

BofA Securities, Inc. is an affiliate of Bank of America, N.A. which has extended credit in other transactions to SMUD.

MUNICIPAL ADVISOR

SMUD has retained PFM Financial Advisors LLC, as Municipal Advisor in connection with various matters relating to the delivery of the 2024 Series M Bonds. The Municipal Advisor assumes no responsibility for the accuracy, completeness or fairness of the information contained in this Official Statement. The Municipal Advisor is an independent advisory firm and is not engaged in underwriting or distribution of securities. The Municipal Advisor will receive compensation that is contingent upon the sale, issuance and delivery of the 2024 Series M Bonds.

APPROVAL OF LEGAL PROCEEDINGS

The validity of the 2024 Series M Bonds and certain other legal matters are subject to the approval of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD. The approving opinion of Bond Counsel will be delivered with the 2024 Series M Bonds in substantially the form appearing in APPENDIX E. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Official Statement. Certain legal matters will be passed on for the Underwriters by Nixon Peabody LLP, San Francisco, California, counsel to the Underwriters. Counsel to the Underwriters will receive compensation that is contingent upon the sale, issuance and delivery of the 2024 Series M Bonds.

FINANCIAL STATEMENTS

SMUD's audited, consolidated financial statements for the years ended December 31, 2023 and December 31, 2022 are included in APPENDIX B attached to this Official Statement. These financial statements have been audited by Baker Tilly US, LLP, Madison, Wisconsin (the "Auditor"), for the periods indicated and to the extent set forth in their report thereon and should be read in their entirety. SMUD has not requested nor did it obtain permission from the Auditor to include the audited, consolidated financial statements as an appendix to this Official Statement. Accordingly, the Auditor has not performed any procedures to review the financial condition or operations of SMUD subsequent to the date of its report included therein, nor has it reviewed any information contained in this Official Statement.

TAX MATTERS

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD ("Bond Counsel"), based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the 2024 Series M Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code") and is exempt from State of California personal income taxes. Bond Counsel is of the further opinion that interest on the 2024 Series M Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. Bond Counsel observes that interest on the 2024 Series M Bonds included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2024 Series M Bonds. A complete copy of the proposed form of opinion of Bond Counsel is set forth in APPENDIX E hereto.

To the extent the issue price of any maturity of the 2024 Series M Bonds is less than the amount to be paid at maturity of such 2024 Series M Bonds (excluding amounts stated to be interest and payable at least annually over the term of such 2024 Series M Bonds), the difference constitutes "original issue discount," the accrual of which, to the extent properly allocable to each Beneficial Owner thereof, is treated as interest on the 2024 Series M Bonds which is excluded from gross income for federal income tax purposes and exempt from State of California personal income taxes. For this purpose, the issue price of a particular maturity of the 2024 Series M Bonds is the first price at which a substantial amount of such maturity of the 2024 Series M Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of the 2024 Series M Bonds accrues daily over the term to maturity of such 2024 Series M Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such 2024 Series M Bonds to determine taxable gain or loss upon trade or business disposition (including sale, redemption, or payment on maturity) of such 2024 Series M Bonds. Beneficial Owners of the 2024 Series M Bonds should consult their own tax advisors with respect to the tax consequences of ownership of 2024 Series M Bonds with original issue discount, including the treatment of Beneficial Owners who do not purchase such 2024 Series M Bonds in the original offering to the public at the first price at which a substantial amount of such 2024 Series M Bonds is sold to the public.

2024 Series M Bonds purchased, whether at original issuance or otherwise, for an amount higher than their principal amount payable at maturity (or, in some cases, at their earlier call date) ("Premium Bonds") will be treated as having amortizable bond premium. No deduction is allowable for the amortizable bond premium in the case of bonds, like the Premium Bonds, the interest on which is

excluded from gross income for federal income tax purposes. However, the amount of tax-exempt interest received, and a Beneficial Owner's basis in a Premium Bond, will be reduced by the amount of amortizable bond premium properly allocable to such Beneficial Owner. Beneficial Owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the 2024 Series M Bonds. SMUD has made certain representations and covenanted to comply with certain restrictions, conditions and requirements designed to ensure that interest on the 2024 Series M Bonds will not be included in federal gross income. Inaccuracy of these representations or failure to comply with these covenants may result in interest on the 2024 Series M Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the 2024 Series M Bonds. The opinion of Bond Counsel assumes the accuracy of these representations and compliance with these covenants. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken), or events occurring (or not occurring), or any other matters coming to Bond Counsel's attention after the date of issuance of the 2024 Series M Bonds may adversely affect the value of, or the tax status of interest on, the 2024 Series M Bonds. Accordingly, the opinion of Bond Counsel is not intended to, and may not, be relied upon in connection with any such actions, events or matters.

Although Bond Counsel is of the opinion that interest on the 2024 Series M Bonds is excluded from gross income for federal income tax purposes and is exempt from State of California personal income taxes, the ownership or disposition of, or the accrual or receipt of amounts treated as interest on, the 2024 Series M Bonds may otherwise affect a Beneficial Owner's federal, state or local tax liability. The nature and extent of these other tax consequences depends upon the particular tax status of the Beneficial Owner or the Beneficial Owner's other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the 2024 Series M Bonds to be subject, directly or indirectly, in whole or in part, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent Beneficial Owners from realizing the full current benefit of the tax status of such interest. The introduction or enactment of any such legislative proposals or clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the 2024 Series M Bonds. Prospective purchasers of the 2024 Series M Bonds should consult their own tax advisors regarding the potential impact of any pending or proposed federal or state tax legislation, regulations or litigation, as to which Bond Counsel expresses no opinion.

The opinion of Bond Counsel is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the 2024 Series M Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service ("IRS") or the courts. Furthermore, Bond Counsel cannot give and has not given any opinion or assurance about the future activities of SMUD, or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. SMUD has covenanted, however, to comply with the requirements of the Code.

Bond Counsel's engagement with respect to the 2024 Series M Bonds ends with the issuance of the 2024 Series M Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend SMUD or the Beneficial Owners regarding the tax-exempt status of the 2024 Series M Bonds in the event of an audit examination by the IRS. Under current procedures, Beneficial Owners would have little, if any, right to participate in the audit examination process. Moreover, because achieving judicial review in

connection with an audit examination of tax-exempt bonds is difficult, obtaining an independent review of IRS positions with which SMUD legitimately disagrees may not be practicable. Any action of the IRS, including but not limited to selection of the 2024 Series M Bonds for audit, or the course or result of such audit, or an audit of bonds presenting similar tax issues may affect the market price for, or the marketability of, the 2024 Series M Bonds, and may cause SMUD or the Beneficial Owners to incur significant expense.

Payments on the 2024 Series M Bonds generally will be subject to U.S. information reporting and possibly to “backup withholding.” Under Section 3406 of the Code and applicable U.S. Treasury Regulations issued thereunder, a non-corporate Beneficial Owner of 2024 Series M Bonds may be subject to backup withholding with respect to “reportable payments,” which include interest paid on the 2024 Series M Bonds and the gross proceeds of a sale, exchange, redemption, retirement or other disposition of the 2024 Series M Bonds. The payor will be required to deduct and withhold the prescribed amounts if (i) the payee fails to furnish a U.S. taxpayer identification number (“TIN”) to the payor in the manner required, (ii) the IRS notifies the payor that the TIN furnished by the payee is incorrect, (iii) there has been a “notified payee underreporting” described in Section 3406(c) of the Code or (iv) the payee fails to certify under penalty of perjury that the payee is not subject to withholding under Section 3406(a)(1)(C) of the Code. Amounts withheld under the backup withholding rules may be refunded or credited against a Beneficial Owner’s federal income tax liability, if any, provided that the required information is timely furnished to the IRS. Certain Beneficial Owners (including among others, corporations and certain tax-exempt organizations) are not subject to backup withholding. The failure to comply with the backup withholding rules may result in the imposition of penalties by the IRS.

CONTINUING DISCLOSURE UNDERTAKING

Pursuant to the Continuing Disclosure Agreement, SMUD will covenant for the benefit of the holders and the “Beneficial Owners” (as defined in the Continuing Disclosure Agreement) of the 2024 Series M Bonds to provide certain financial information and operating data relating to SMUD by not later than 180 days after the end of each of SMUD’s fiscal years (presently, each December 31), commencing with the report for the year ending December 31, 2024 (the “Annual Report”), and to provide notices of the occurrence of certain listed events with respect to the 2024 Series M Bonds. The Annual Report will be filed by or on behalf of SMUD with the Municipal Securities Rulemaking Board (the “MSRB”) through its Electronic Municipal Market Access system (“EMMA”) and any notices of such listed events will be filed by or on behalf of SMUD with the MSRB through EMMA. The specific nature of the information to be contained in the Annual Report and the notices of listed events are set forth in the form of the Continuing Disclosure Agreement which is included in its entirety in APPENDIX F hereto. SMUD’s covenant will be made in order to assist the Underwriters in complying with Securities and Exchange Commission Rule 15c2-12.

[UPDATE/CONFIRM] [In a limited number of circumstances, certain of the annual reports, audited financial statements or listed event filings required to be made by SMUD during the last five years under its continuing disclosure undertakings were not connected to all of the CUSIP numbers of the bonds subject to the continuing disclosure undertakings. In addition, SMUD entered into two subordinated forward starting interest rate swaps in December 2019 and filed a notice of the interest rate swaps with the MSRB through EMMA in April 2020. A notice of rating upgrade on October 6, 2020, by Moody’s Investors Service of the Northern California Gas Authority No. 1 Gas Project Revenue Bonds, Series 2007B, was also not filed until October 28, 2020.]

RATINGS

Fitch Ratings, Inc. (“Fitch”) and Moody’s Investors Service, Inc. (“Moody’s”) have assigned ratings of “[AA (stable outlook)]” and “[Aa2 (stable outlook)],” respectively, to the 2024 Series M Bonds. Such ratings reflect only the views of such organizations and are not a recommendation to buy, sell or hold the 2024 Series M Bonds. Explanations of the significance of such ratings may be obtained only from the respective rating agencies. SMUD has furnished to Fitch and Moody’s certain information and materials concerning the 2024 Series M Bonds and itself. Generally, a rating agency bases its rating on the information and materials furnished to it and on investigations, studies and assumptions of its own. There is no assurance that such ratings will continue for any given period or that they will not be revised downward, suspended or withdrawn entirely by the respective rating agencies, if in the judgment of such rating agency, circumstances so warrant. SMUD has not, other than as described under “CONTINUING DISCLOSURE UNDERTAKING” above, and the Underwriters have not undertaken any responsibility either to bring to the attention of the holders or beneficial owners of the 2024 Series M Bonds any proposed revision, suspension or withdrawal of any rating on the 2024 Series M Bonds or to oppose any such proposed revision, suspension or withdrawal. Any such downward revision, suspension or withdrawal of such ratings may have an adverse effect on the market price or marketability of the 2024 Series M Bonds.

MISCELLANEOUS

This Official Statement includes descriptions of the terms of the 2024 Series M Bonds, power purchase agreements with certain other parties, pooling and other agreements, the Resolution and certain provisions of the Act. Such descriptions do not purport to be complete, and all such descriptions and references thereto are qualified in their entirety by reference to each such document.

Copies of the Resolution, which forms a contract with the Holders of the 2024 Series M Bonds, will be made available upon request.

This Official Statement has been duly authorized by the Board of Directors of SMUD.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Chief Executive Officer and General Manager

APPENDIX A

INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT

DRAFT

APPENDIX A

**INFORMATION REGARDING
SACRAMENTO MUNICIPAL UTILITY DISTRICT**

TABLE OF CONTENTS

	Page
INTRODUCTION	A-1
General.....	A-1
Independent Governance	A-1
THE SERVICE AREA AND ELECTRIC SYSTEM.....	A-4
The Service Area.....	A-4
The Electric System.....	A-5
BUSINESS STRATEGY	A-5
General.....	A-5
Serving SMUD’s Customers.....	A-6
Sustainable Power Supply and Transmission	A-8
Electricity, Natural Gas, and Related Hedging.....	A-13
Managing Risks	A-14
Competitive Challenges	A-14
Leveraging Core Competencies.....	A-14
FACTORS AFFECTING THE REGION.....	A-16
Precipitation Variability.....	A-16
Wildfires	A-17
August 2020 Heat Wave	A-19
September 2022 Heat Wave.....	A-19
Storm Damage	A-19
Cosumnes Power Plant Outage.....	A-20
Impacts from COVID-19 Pandemic	A-20
RATES AND CUSTOMER BASE	A-21
Rates and Charges.....	A-21
Rate Stabilization Funds	A-22
Low Income Discount.....	A-23
Rate Comparisons.....	A-24
Allocation of Revenue by Customer Class	A-26
Customer Base; Largest Customers	A-27
POWER SUPPLY AND TRANSMISSION.....	A-28
Power Supply Resources.....	A-28
Power Generation Facilities.....	A-29
Fuel Supply	A-32
Gas Transmission.....	A-34
Gas Storage.....	A-35
Power Purchase Agreements.....	A-36
Transmission Service Agreements.....	A-39
Projected Resources	A-40
Demand Side Management Programs.....	A-41
Balancing Authority Area Agreements.....	A-44
Power Pool and Other Agreements.....	A-44
Other Interconnection Agreements	A-45
SELECTED OPERATING DATA.....	A-47

TABLE OF CONTENTS

(continued)

	Page
SELECTED FINANCIAL DATA	A-47
SMUD Financial Information	A-47
Financial Information of SMUD and the Authorities	A-49
Management’s Discussion of SMUD’s Operating Results	A-50
RANCHO SECO DECOMMISSIONING.....	A-51
EMPLOYEE RELATIONS	A-53
RETIREMENT BENEFITS AND POST-EMPLOYMENT MEDICAL BENEFITS	A-53
Pension Plans	A-53
Other Post-Employment Benefits	A-55
CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS	A-56
Estimated Capital Requirements.....	A-56
Outstanding Indebtedness	A-56
INSURANCE.....	A-60
LEGAL PROCEEDINGS	A-60
Environmental Litigation	A-60
Proposition 26 Lawsuit	A-60
Other Litigation Matters	A-61
FERC Administrative Proceedings.....	A-61
CPUC Administrative Proceedings.....	A-61
DEVELOPMENTS IN THE ENERGY SECTOR	A-62
California Electric Market	A-62
Cybersecurity	A-63
Physical Security.....	A-63
Federal Legislation and Regulatory Proceedings.....	A-63
State Legislation and Regulatory Proceedings.....	A-67
Future Regulation	A-74
OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY.....	A-74
CAISO Market Initiatives	A-74
Resource Adequacy Filing.....	A-75
Western Energy Imbalance Market and Extended Day Ahead Market	A-75
Other Factors.....	A-76

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

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Lisa Limcaco, Controller

INTRODUCTION

General

The Sacramento Municipal Utility District (“SMUD”) owns and operates an electric system that has provided retail electric service since 1946. SMUD’s current service area is approximately 900 square miles, and includes the principal parts of Sacramento County and small portions of Placer and Yolo counties. See “THE SERVICE AREA AND ELECTRIC SYSTEM – The Service Area.”

Independent Governance

SMUD is an independently run community-owned organization. SMUD is not required by law to transfer any portion of its collections from customers to any local government.

SMUD is governed by a Board of Directors (the “Board”), which consists of seven directors elected by ward for staggered four-year terms. The Board determines policy and appoints the Chief Executive Officer and General Manager, who is responsible for SMUD’s overall management and day-to-day operations. The Chief Executive Officer and General Manager is responsible for the hiring and removal of all employees, other than the Chief Legal and Government Affairs Officer and General Counsel, the Internal Auditor and the Special Assistant to the Board, who are hired and may be removed only by the Board. The employment status of nearly all SMUD employees is governed by a civil service system administered by the Chief Executive Officer and General Manager.

The Board elects its President and Vice President annually to take office in January. The current members of the Board are as follows:

<u>Name</u>	<u>Occupation</u>	<u>Ward</u>	<u>Term Expires</u>
Brandon Rose.....	Air Pollution Specialist, California Environmental Protection Agency	Ward 1	December 31, 2024
Nancy Bui-Thompson.....	Chief Information Officer, Wellspace Health	Ward 2	December 31, 2024
Gregg Fishman, Vice-President....	Sr. Community Relations Officer at Sacramento Regional Transit District	Ward 3	December 31, 2026
Rosanna Herber, President.....	Community Engagement Manager	Ward 4	December 31, 2026
Rob Kerth	Business Owner	Ward 5	December 31, 2024
Dave Tamayo.....	Retired Environmental Specialist	Ward 6	December 31, 2026
Heidi Sanborn	Executive Director, National Stewardship Action Council	Ward 7	December 31, 2026

SMUD’s senior management consists of the following executives:

Chief Executive Officer & General Manager. Paul Lau was named Chief Executive Officer and General Manager (“CEO & GM”) of SMUD in October 2020. He reports to the SMUD Board of Directors. As CEO & GM, he leads the sixth largest community-owned electric utility in the nation, serving a population of approximately 1.5 million residents and managing a \$2.1 billion budget. Mr. Lau previously served as SMUD’s Chief Grid Strategy & Operations Officer and has held several other executive leadership positions during his 42-year career at SMUD. He serves on several national and local boards, including the Large Public Power Council, California Municipal Utilities Association, American Public Power Association, and Smart Electric Power Alliance, and as a Commissioner of the Balancing Authority

of Northern California (“BANC”). A registered professional electrical engineer in the State of California (the “State”), Mr. Lau received his bachelor’s degree in electrical power engineering from California State University, Sacramento.

Chief Customer Officer. Brandy Bolden reports to the CEO & GM and oversees SMUD’s Customer and Community Services business unit. She is responsible for customer experience delivery across SMUD’s residential and commercial customer segments. She provides leadership and oversight of customer operations including customer care and revenue management, business intelligence, strategic account management, customer experience and segmentation strategy, channel management, customer program and service delivery, and special assistance. She is also responsible for commercial development and business attraction and oversees Community Energy Services, which provides services and support for community choice aggregators. Since joining SMUD in 2003, Brandy has demonstrated strong leadership and held a variety of senior leadership roles, including leading the Customer & Community Services project management office and the dual role of director of Customer Care and Revenue Operations. Ms. Bolden led the team responsible for implementing time-of-day rates, streamlining the meter-to-cash processes, delivering key billing and payment experience enhancements and recognizing operational efficiencies that resulted in sustained annual savings for SMUD. Ms. Bolden holds a Bachelor of Arts in Sociology from University of California, Davis.

Chief Information Officer. Suresh Kotha reports to the CEO & GM and is responsible for SMUD’s information technology strategy, operations, infrastructure, IT Project Management Office, enterprise innovation process, and cybersecurity. More recently, Mr. Kotha has been leading many technology efforts that are integral to developing a grid of the future that will help SMUD achieve its zero-carbon goal, including its Advanced Distribution Management System, the software platform that supports the full suite of distribution management and optimization, and next-generation network upgrades. Mr. Kotha joined SMUD in 2002 as a principal technical developer, with responsibility for designing and leading implementation and upgrades of multiple technology systems, including the SAP software platform and SMUD’s meter-to-cash systems. He holds a Master of Technology in Computer Science from Jawaharlal Nehru Technology University and a Bachelor of Engineering in Electronics & Communications Engineering from Gulbarga University.

Chief Diversity Officer. Jose Bodipo-Memba reports to the CEO & GM and is responsible for human resources, workforce diversity and inclusion, workforce business planning, SMUD’s Sustainable Communities program, facilities, security and emergency operations. Mr. Bodipo-Memba joined SMUD in 2010 as an environmental specialist and became manager of Environmental Services in 2016. He most recently served as SMUD’s first director of Sustainable Communities. Mr. Bodipo-Memba holds a Bachelor of Arts degree in history from University of California, Berkley and Masters of Business Administration from Drexel University.

Chief Legal & Government Affairs Officer and General Counsel. Laura Lewis was named general counsel for SMUD in April 2014. In this position she serves as chief lawyer and manages SMUD’s legal office and its staff of eight attorneys. She also serves as the secretary to SMUD’s elected board of directors. She reports to the Board and to the CEO & GM and has responsibility for all legal matters in which SMUD is a party to, or has an interest in. Ms. Lewis also oversees SMUD’s government affairs and reliability compliance department. In this capacity, she is responsible for management and coordination of all legislative matters and regulatory requirements affecting SMUD at the state and federal level, including the FERC-NERC electric reliability standards. Ms. Lewis is also responsible for Procurement, Warehouse & Fleet and Energy Trading & Contracts. Ms. Lewis joined SMUD in 1997 as a staff attorney, serving in that capacity through 1999, after which she moved to the San Francisco law firm Davis Wright Tremaine. In 2002, she returned to SMUD as a senior attorney. In 2010, she became assistant general counsel and in 2013 was appointed chief assistant general counsel. She holds a juris doctorate from McGeorge School of

Law, where she won membership in the Order of the Coif honor society. She holds a bachelor's degree in political science from the University of California, San Diego and is a member of the American Bar Association, the Energy Bar Association, and the State Bar of California.

Chief Operating Officer. Frankie McDermott reports to the CEO & GM and is responsible for providing strategic leadership and tactical oversight related to the safe and reliable transmission and delivery of energy to customers, ensuring efficient planning, construction, operation and maintenance of transmission, and distribution facilities. This position has primary responsibility for the processes and functions related to system reliability and operations across SMUD. The Chief Operating Officer is also the safety leader for the enterprise, leader of operational efficiency and responsible for all non-IT capital investments. Prior to this role, Mr. McDermott served as Chief Energy Delivery Officer and Chief Customer Officer, responsible for SMUD's overall retail strategy. From 2010 to 2014, he served as customer services director, which included managing relationships with customer segments as SMUD moved forward with smart-grid technologies. Prior to that, he served as manager of enterprise performance and held positions in supply chain and in general services. Before joining SMUD in 2003, Mr. McDermott served in management roles in the semiconductor industry at NEC Electronics in Roseville, California and in Ireland. After engineering school in Ireland, he earned an MBA from Golden Gate University and completed the Advanced Management Program at the Haas School of Business at the University of California Berkeley.

Chief Zero Carbon Officer. Lora Anguay reports to the CEO & GM and is responsible for leadership oversight of SMUD's Energy Supply which includes SMUD's Power Generation Assets, Resource Planning and Customer and Grid Strategy. This role is also responsible for the delivery of SMUD's plan to provide 100% carbon free energy resources by 2030. This includes obtaining new grants and partnerships, overseeing research and development, designing distributed energy resource programs, enabling processes to settle distributed energy transactions with SMUD's customers and transitioning SMUD's power generation assets and energy contracts to zero carbon resources. Prior to assuming this role, Ms. Anguay was the director of Distribution Operations & Maintenance and was responsible for the day-to-day operations of SMUD's electric distribution grid. Before that she was an engineering designer, process control supervisor, project manager for smart meter deployment, a senior project manager for smart grid distribution automation and supervisor in Grid Assets. Before SMUD, she worked for Oracle Corporation as a finance manager and is a veteran who served in the United States Coast Guard. Ms. Anguay joined SMUD in 2004 and holds a Bachelor of Science degree in business administration from California State University, Sacramento.

Chief Financial Officer. Scott Martin reports to the CEO & GM and is responsible for corporate accounting, treasury operations, risk management, and planning and budgets functions. He is also responsible for strategies across the company and driving prioritization including zero carbon, rates and pricing, enterprise strategic planning and enterprise prioritization. Mr. Martin is a seasoned executive with more than 30 years of experience. Prior to assuming this role, Mr. Martin was SMUD's Chief Strategy Officer. Mr. Martin's previous experience also includes serving as SMUD's customer strategy planning supervisor. Mr. Martin joined SMUD in 1999 and holds a Bachelor of Arts degree in economics from the University of California, Berkeley and a Master of Arts degree in economics from the University of Nevada, Las Vegas.

Chief Marketing & Communications Officer. Farres Everly reports to the CEO & GM and is responsible for all aspects of SMUD's marketing, market research, corporate communications, website, graphic design, video services, data analytics, social media, community engagement, crisis communications, and public affairs activities. Mr. Everly led the creative development and execution of SMUD's numerous award-winning marketing and outreach campaigns and developed the community engagement and communications strategies that resulted in SMUD being ranked number one in California in J.D. Power's annual customer satisfaction surveys and in SMUD becoming the first utility to receive J.D.

Power's Certified Sustainability Leader designation. Prior to joining SMUD, Mr. Everly held marketing and communications management roles at VSP and the Money Store. He holds a bachelor's degree in journalism from California State University, Chico.

Treasurer. Russell Mills reports to the CFO. He oversees all treasury operations, including debt and cash management, banking, financial planning and forecasting, commodity risk management, property and casualty insurance, and is responsible for developing and implementing capital borrowing strategies. Mr. Mills also serves as treasurer for the Transmission Agency of Northern California ("TANC"), the Sacramento Municipal Utility District Financing Authority ("SFA"), the Northern California Gas Authority No. 1 ("NCGA"), the Northern California Energy Authority ("NCEA") and BANC. Before joining SMUD in 2018 as Treasurer, Mr. Mills served as Chief Financial Officer of Southern California Public Power Authority. He also served as the Chief Financial Officer of the Power Supply Program at the California Department of Water Resources ("DWR"). He holds an MBA from Loyola Marymount University, and a bachelor's degree in economics from Towson University in Baltimore, Maryland. Mr. Mills also holds the Energy Risk Professional (ERP) designation and is a CFA level II candidate.

Controller. Lisa Limcaco reports to the CFO and is responsible for accounting and financial reporting at SMUD. Prior to her appointment as controller in 2020, Ms. Limcaco served as an assistant controller, manager of customer value, performance and projects, senior energy commodity specialist and as principal accountant for SMUD's joint powers authorities. Ms. Limcaco also serves as controller for TANC, SFA, NCGA, NCEA and BANC. Before joining SMUD in 2010 as a senior accountant, Ms. Limcaco had 12-years' experience as the Director of Accounting and controller for a food service provider in Sacramento and over 13-years' experience in public accounting including audit manager at Price Waterhouse LLP. Ms. Limcaco holds a bachelor's degree in accounting from the University of Hawaii, a Master of Business Administration from Sacramento State University and is a Certified Public Accountant in the State.

THE SERVICE AREA AND ELECTRIC SYSTEM

The Service Area

SMUD is the primary distributor of electric power within an area of approximately 900 square miles in central California. The service area includes the State Capital, Sacramento, the populous areas principally to the northeast and south of the City of Sacramento (the "City" or "Sacramento") and the agricultural areas to the north and south. The City is located 85 miles northeast of San Francisco.

SMUD's electric system supplies power to a population of approximately 1.5 million with a total annual retail load of approximately 10,104 million kilowatt-hours ("kWh") for the year ended December 31, 2023. As the capital of the nation's most populous state, Sacramento benefits from the historically stabilizing influence of a large government sector. Sacramento is home to the State government headquarters, the Sacramento County seat, the City government and various special districts that combine to make government the largest single employment sector in the Sacramento area. Information technology, transportation, education and health services, leisure and hospitality, and construction round out the other major sectors of employment and industry in the area.

SMUD's annual peak load has averaged 3,045 Megawatts ("MW") over the last three years, with SMUD's record peak load of 3,299 MW occurring on July 24, 2006. In 2022, SMUD recorded its second highest peak load of 3,263 MW. SMUD reviews its load forecast, at a minimum, on an annual basis.

The Electric System

SMUD owns and operates an integrated electric system that includes generation, transmission and distribution facilities.

SMUD supplies power to its bulk power substations through a 230 kilovolt (“kV”) and 115 kV transmission system. This system transmits power from SMUD’s generation plants and interconnects with Pacific Gas & Electric (“PG&E”) and the Western Area Power Administration (“WAPA”). Power is distributed throughout Sacramento County via a 69 kV sub-transmission system with the exception of the City’s downtown area, which is served from the 115 kV transmission system. The downtown area is served from 115/12 kV and 115/21 kV substations. The distribution system serving the remainder of SMUD’s service territory is comprised of 69/12 kV substations with overhead and underground 12 kV distribution circuits.

BUSINESS STRATEGY

General

SMUD’s Board of Directors has established the following purpose and vision statements: “SMUD’s purpose is to enhance the quality of life for our customers and community by providing reliable and affordable electricity, and leading the transition to a clean energy future. SMUD’s vision is to be a trusted and powerful partner in achieving an inclusive, zero carbon economy. SMUD will leverage its relationships to accelerate innovation, ensure energy affordability and reliability, protect the environment, eliminate greenhouse gas emissions, catalyze economic and workforce development, promote environmental justice, and enhance community vitality for all.” The Board has adopted a set of Strategic Directions with related metrics, which it considers essential for the success of SMUD and for serving SMUD’s customers. These include competitive rates, access to credit markets, reliability, customer relations, environmental leadership, resource planning, enterprise risk management and safety. Some of the general elements in SMUD’s business strategy are:

- developing and maintaining a sustainable and reliable power supply to meet demand growth consistent with State mandates and the Board’s directions for renewable energy and the reduction of carbon emissions to zero by 2030. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *2030 Zero Carbon Plan*”;
- working closely with customers to provide the information, tools and incentives to assist them to more efficiently manage energy use, which will contribute to meeting greenhouse gas (“GHG”) emission targets and managing needle peak demand requirements (those 40 or so hours of the year with extreme temperatures when customer demand surges by up to 400 additional MW);
- managing price, volumetric and credit risks associated with energy and natural gas procurement;
- attracting, developing and retaining a diverse, skilled and engaged workforce that reflects SMUD’s values and is committed to achieving SMUD’s mission;
- retaining local decision making authority and operational independence; and
- collaborating regionally to attract new businesses and grow existing business to diversify and strengthen the Sacramento economy.

SMUD’s long-range business strategy focuses in part on ensuring financial stability by establishing rates that provide an acceptable fixed charge coverage ratio on a consolidated basis, taking into consideration the impact of capital expenditures and other factors on cash flow. SMUD’s Board policy sets

a minimum fixed charge coverage ratio of 1.50 times for annual budgets, though it generally plans to meet a minimum fixed charge coverage ratio of 1.70 times. Over the past ten years, the actual fixed charge coverage ratio has averaged 2.10 times on a consolidated basis. SMUD also manages its liquidity position by planning for a minimum of 150 days cash on hand and planning to maintain at least \$150 million of available capacity under its commercial paper and line of credit program. SMUD's commercial paper and line of credit program is currently authorized for \$500 million aggregate principal amount outstanding at any one time. As of March 21, 2024, SMUD had \$150 million aggregate principal amount of its commercial paper notes outstanding and \$350 million of the authorized aggregate principal amount of its commercial paper and line of credit program available for use. SMUD uses cash on hand and commercial paper and a line of credit to fund capital expenditures, then issues debt to reimburse itself for cash expended for qualified capital expenditures and/or to pay down the outstanding principal amount of its commercial paper program and line of credit. Over the past ten years, the days cash on hand has averaged 216. The resolutions securing SMUD's Senior Bonds and Subordinated Bonds (each as defined under the caption "CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS" below) do not require SMUD to maintain a minimum fixed charge coverage ratio, minimum days cash on hand or minimum available capacity under its commercial paper program and line of credit.

In addition, SMUD's business strategy focuses on servicing its customers in a progressive, forward-looking manner, addressing current regulatory and legislative issues and potential competitive forces.

Serving SMUD's Customers

SMUD continually looks for ways to better serve and partner with its customers to further strengthen customer loyalty, while providing competitive and fair pricing for SMUD's electric services. SMUD also has a focused effort to assist and incentivize customers to manage energy use more efficiently, which will contribute to meeting GHG emission targets and managing peak demand requirements as noted below.

Digital Enhancements. Customers are increasingly turning to digital channels including SMUD's mobile application, SMUD.org, e-mail and social media to interact and do business with SMUD. SMUD has delivered many digital enhancements, including bill pay functionality; online payment arrangements; start/stop/transfer move service; view of energy usage, chat, an enhanced outage map including meter test functionality; and the SMUD Energy Store, which is an online marketplace for energy-related products. SMUD plans to continue efforts to provide more personalized digital customer experiences.

Advanced Metering, Infrastructure and Rate Design. As a community-owned organization, SMUD is dedicated to providing the tools and transparency in customer energy usage to enable customers to easily and positively affect energy usage, energy cost, and climate change. In 2012 SMUD installed smart technology, including 617,000 digital communicating smart meters, distribution automation systems and equipment to facilitate load management. The advanced technology has allowed SMUD to deliver tools such as text and e-mail bill alerts and online energy usage comparison charts to help customers manage energy use. SMUD has leveraged smart grid investments to improve reliability, reduce losses, reduce power quality issues and improve customer service through better, more timely information.

Time-of-Day Rates. On June 15, 2017, the Board approved time-of-day ("TOD") rates as the standard rate for residential customers. The residential rate transition began in the fourth quarter of 2018 and was completed in the fourth quarter of 2019.

All of SMUD's business customers are also on time-based rates. On June 24, 2019, the Board approved an update to the commercial TOD rates to improve consistency and better align commercial rates

with current energy market prices. The transition was completed in the first quarter of 2022. See “RATES AND CUSTOMER BASE – Rates and Charges.”

Renewable Options. SMUD’s customers have been increasingly interested in distributed energy resources, mainly through the installation of solar systems. As of December 2023, approximately 51,374 of SMUD’s residential and commercial customers, approximately 8% of retail customers, had installed solar systems, representing approximately 360 MW of solar installations.

As the cost of energy storage continues to decline, SMUD anticipates an increase in behind-the-meter energy storage, mainly through the installation of battery storage systems. As of December 2023, approximately 1,532 of SMUD’s residential and commercial customers, approximately 0.2% of retail customers, had installed storage systems, representing approximately 10 MW of storage.

As another option for solar, SMUD’s SolarShares® pilot program (the “SolarShares Pilot”) was established as a cost-effective and convenient way for commercial customers to meet their energy needs from solar power. The SolarShares Pilot offered SMUD commercial customers the opportunity to receive solar power without upfront costs or equipment installation through 5-, 10- or 20-year purchase contracts. Customers that entered into purchase contracts under the SolarShares Pilot receive up to half of their power from a utility-scale solar system. SMUD supplies solar power for the SolarShares Pilot either by building and maintaining utility-scale solar systems or by procuring solar power from third parties through power purchase agreements. The SolarShares Pilot generation was approximately 3.2% of retail sales in 2023. As of April 30, 2021, SMUD had completed the SolarShares Pilot and is not entering into new purchase contracts under the SolarShares Pilot.

Since January 2020, the California Building Code has required all newly constructed residential buildings under three stories to be powered by photovoltaic solar systems. A new home satisfies this requirement if it installs on-site solar or participates in an approved community solar or energy storage program. In February 2020, SMUD obtained approval from the California Energy Commission (“CEC”) to administer its own community solar program, called Neighborhood SolarShares® (“Neighborhood SolarShares”). SMUD’s Neighborhood SolarShares program can be used by developers of new low-rise residential buildings to satisfy the mandatory solar requirement. See also “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Rooftop Solar Mandate.*” Starting in 2023, the California Building Code’s mandatory solar requirement extends beyond low-rise residential properties, and other changes to the California Building Code’s community solar regulations took effect. SMUD revised its program to align with the new regulations and, in May 2023, obtained approval from the CEC to continue offering its Neighborhood SolarShares compliance option to newly constructed low rise residential homes in its service territory.

In addition to the SolarShares Pilot and Neighborhood SolarShares, SMUD maintains a voluntary green energy pricing program called Greenergy® (“Greenergy”). The Greenergy program allows customers the opportunity to pay an additional amount per month to ensure that either all or part of their electricity comes from green or carbon free energy sources. In 2023, the program allocated Renewable Energy Credits (“RECs”) equivalent to approximately 4.2% of retail sales to its participating customers.

Energy Efficiency. To further assist customers in managing energy usage and reducing regional carbon emissions and air pollution, SMUD offers an extensive array of energy efficiency and building electrification programs and services including financial incentives, loans, energy audits and education. In addition, SMUD has partnered with local developers to incorporate energy efficiency and all-electric construction measures into new residential and commercial construction, which helps developers plan and design efficient, cost-effective and low or zero-emission buildings. As part of SMUD’s 2019 Integrated Resource Plan (“IRP”), SMUD set a goal for regional carbon emissions through transport and building

electrification that aims to reduce carbon emissions in buildings and transport by 64% over the next 20 years. SMUD’s focus on electrification is continued in the Zero Carbon Plan (defined and discussed below). SMUD was the first electric utility in the country to set its efficiency goals based on carbon reductions, allowing building electrification and energy efficiency to both count toward meeting SMUD’s efficiency goals. This is a significant opportunity, as converting a typical home today to all-electric saves more than three times the carbon emissions compared to doing a major energy efficiency upgrade alone to the same building. See “POWER SUPPLY AND TRANSMISSION – Projected Resources.”

Sustainable Power Supply and Transmission

Maintaining a sustainable power supply entails focusing efforts on researching, promoting and implementing new renewable energy technologies and sources to meet SMUD’s long-term commitment to reducing carbon emissions and providing a reliable energy supply. SMUD defines a sustainable power supply as one that reduces SMUD’s GHG emissions to serve retail customer load to zero by 2030. See “– 2030 Zero Carbon Plan” below. SMUD is planning to achieve zero GHG emissions to serve retail customer load through investments in energy efficiency, clean distributed energy resources, renewables portfolio standard (“RPS”) eligible renewables, energy storage, large hydroelectric generation, clean and emissions free fuels, carbon capture and sequestration, and new technologies and business models. Additionally, SMUD plans to continue pursuing GHG emissions reductions through vehicle, building and equipment electrification. At the same time, SMUD’s plans for maintaining a sustainable power supply include assuring the reliability of SMUD’s electric system, minimizing environmental impacts on land, habitat, water and air quality, and maintaining competitive rates relative to other electricity providers in the State.

A number of bills affecting the electric utility industry have been enacted by the State Legislature. In general, these bills regulate GHG emissions and encourage greater investment in energy efficiency and sustainable generation alternatives, principally through more stringent RPS. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings” herein.

2030 Zero Carbon Plan. In July 2020, the Board declared a climate emergency and adopted a resolution calling for SMUD to take significant and consequential actions to reduce its carbon footprint by 2030. On April 28, 2021, the Board approved SMUD’s 2030 Zero Carbon Plan (the “Zero Carbon Plan”). The Zero Carbon Plan is intended to be a flexible roadmap for SMUD to eliminate carbon emissions from its electricity production by 2030 while maintaining reliable and affordable service. To achieve these goals the Zero Carbon Plan is focused on four main areas: natural gas generation repurposing, proven clean technologies, new technologies and business models and financial impacts and options. SMUD plans to revisit the Zero Carbon Plan annually.

The natural gas generation repurposing focus of the Zero Carbon Plan calls for exploring the replacement of two of SMUD’s five Local Gas-Fired Plants (as defined herein) and the retooling of the other three Local Gas-Fired Plants. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Local Gas-Fired Plants.*” Based on SMUD’s studies to date, SMUD estimates that McClellan (as defined herein) and the Campbell Soup Project (as defined herein) can be replaced in the next several years depending on SMUD’s success with replacement resources. Final decisions about the replacement of these two Local Gas-Fired Plants will be based on additional reliability studies and engagement with the community. As part of the Zero Carbon Plan, SMUD is also exploring converting the Carson Project (as defined herein) and the Procter & Gamble Project (as defined herein) to reliability use operations only and investigating the use of alternative fuels like Renewable Natural Gas-biomethane (RNG-biomethane), hydrogen and other biofuels for the Carson Project, the Procter & Gamble Project, and the Consumnes Power Plant (as defined herein). In addition, SMUD is investigating new technologies such as long duration energy storage, carbon capture and sequestration, hydrogen and other clean fuel alternatives to help support

the reduction of GHG emissions in SMUD’s energy supply. All final generator configurations are subject to reliability assessments.

The proven clean technologies focus of the Zero Carbon Plan calls for SMUD to procure approximately 1,100 to 1,500 MW of utility-scale solar photovoltaic (“PV”) generating capacity, 700 to 1,100 MW of local utility-scale battery storage, 300 to 500 MW of wind generating capacity, and 100 to 220 MW of geothermal generating capacity. The Zero Carbon Plan also estimates that customer installation of approximately 500 to 750 MW of behind-the-meter solar PV generating capacity and approximately 50 to 250 MW of behind-the-meter battery storage will assist SMUD with achieving the Zero Carbon Plan goals.

With respect to new technologies and business models, the Zero Carbon Plan focuses on evaluating, prioritizing and scaling the emerging technologies that SMUD expects will have the largest impact on reducing carbon in SMUD’s 2030 resource mix. SMUD is currently focused on various areas of technology and customer-focused programs, including electrification, education, demand flexibility, virtual power plants, vehicle-to-grid technology, and new grid-scale technologies. The Zero Carbon Plan forecasts that customer-owned devices and SMUD customer-focused programs will contribute between 360 and 1,300 MW of capacity to SMUD’s grid by 2030.

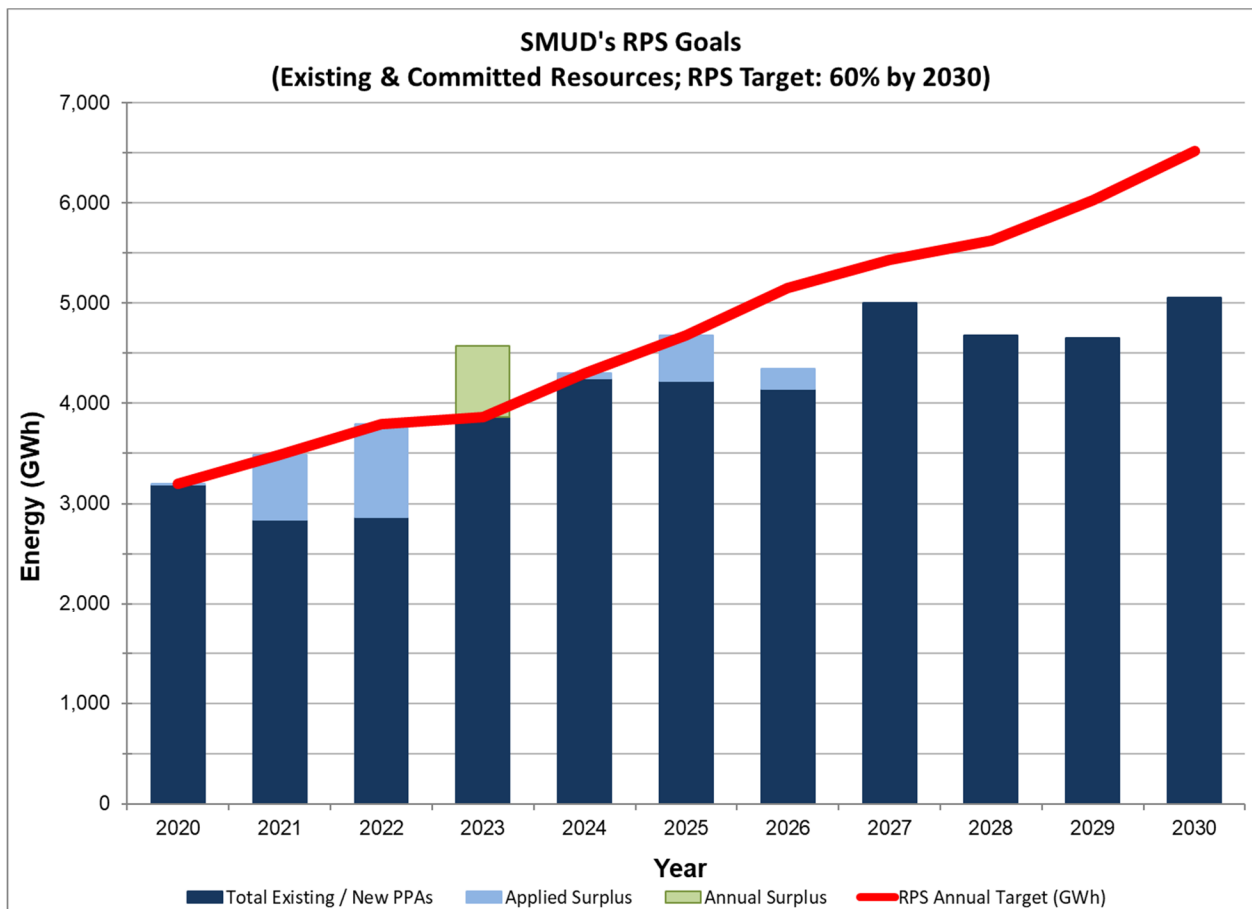
The financial impacts and options focus of the Zero Carbon Plan aims to keep SMUD rate increases at or below the rate of inflation while achieving SMUD’s goal of eliminating carbon emissions from its power supply by 2030. To pay for the expected costs of the Zero Carbon Plan and keep rate increases at or below the rate of inflation, the Zero Carbon Plan estimates the need for SMUD to realize between \$50 million and \$150 million of sustained annual savings. SMUD currently plans to achieve these sustained annual savings by exploring the implementation of operational savings strategies and pursuing partnership and grant opportunities.

While the ultimate impacts of the Zero Carbon Plan on SMUD’s financial results and operations are difficult to predict and are dependent on a variety of factors, such as the relative cost of procuring energy from clean technologies, the availability and relative cost of new technologies, and the adoption and implementation of energy efficiency and other measures by SMUD’s customers, such impacts could be material.

Renewable Energy and Climate Change. The California Renewable Energy Resources Act, established by Senate Bill X1-2 (“SBX1-2”) and the Clean Energy and Pollution Reduction Act of 2015, enacted by Senate Bill 350 (“SB 350”) require that SMUD meets 33% of its retail sales from RPS-eligible renewable resources by 2020 and 50% of its retail sales from RPS-eligible renewable resources by 2030. Senate Bill 100 (“SB 100”), passed by the legislature and approved by then-Governor Brown on September 10, 2018, accelerates the RPS targets and establishes a new 60% target by 2030. The bill also created a planning goal to meet all of the State’s retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Renewables Portfolio Standards*” for a discussion of the State RPS requirements.

SMUD’s compliance with State RPS requirements is evaluated over 3- or 4-year compliance periods. SMUD met the State RPS requirements for the first compliance period (2011-2013) and second compliance period (2014-2016). The third compliance period (2017-2020) required SMUD to source one-third of its energy from renewable resources, and SMUD had sufficient RECs to meet the third compliance period requirements. SMUD filed its 2020 and third compliance period RPS compliance report with the CEC in the second quarter of 2021 and the CEC adopted SMUD’s third compliance period verification report in December 2023. SMUD expects the confirmation letter from the CEC indicating that SMUD was

in full compliance with its third compliance period RPS obligations in the first quarter of 2024. As of the end of the third compliance period (2020), SMUD had approximately one million surplus RECs available to help meet future RPS targets. SMUD expects to file its 2023 RPS compliance report by July 1, 2024, showing that SMUD will have provided approximately 50% of its retail sales from RPS-eligible renewable resources in 2023, which is greater than the interim 2023 RPS target of 41.25%. RPS compliance is determined by compliance period and not by individual years and SMUD anticipates having sufficient surplus procured and/or under contract resources in the fourth compliance period (2021-2024) to be in compliance with the RPS requirements. In addition to meeting RPS standards, SMUD serves an additional 7.4% of its customer load with renewable energy through its voluntary SolarShares and Greenergy pricing programs described above. SMUD estimates that it has sufficient renewable energy deliveries, new power supply contract commitments, new power supply commitments under active discussion, and RPS-eligible surplus carryover to meet its RPS requirements through 2025. Additional resources have been identified that are expected to provide sufficient RPS-eligible resources to cover most of SMUD’s RPS requirements through 2030. Future solicitations may be needed to fill any remaining gaps. The following chart illustrates SMUD’s current RPS requirements through 2030 and its existing and committed resources utilized to meet those requirements.



In addition to procuring new sources, meeting the RPS requirements will require replacement of certain existing renewable contracts which expire in future years. While SMUD anticipates it will meet much of its renewable resource requirements through purchase contracts with third parties, it continues to explore additional options, including wind, solar, biomass, and geothermal developments, partnering with other utilities on future projects, and local development options. SMUD's resource forecast (see "POWER SUPPLY AND TRANSMISSION – Projected Resources") accounts for future renewable resources as a component of "Uncommitted Purchases." To meet SMUD's Zero Carbon Plan goals, SMUD anticipates meeting loads in 2030 with approximately 70-80% renewable resources, in addition to hydro and other new zero carbon technologies. See "– 2030 Zero Carbon Plan" above.

Given the intermittent nature of power from renewable resources such as wind and solar, SMUD is exploring and investing in options that provide the flexibility to manage the intermittency of such renewable resources. Potential options include energy storage resources, which SMUD has committed to as part of the Zero Carbon Plan, and expanding load management resources. Additionally, on April 3, 2019, SMUD, through its membership in BANC, a joint exercise of powers agency formed in 2009, and currently comprised of SMUD, the Modesto Irrigation District ("MID"), the City of Roseville ("Roseville"), the City of Redding ("Redding"), the City of Shasta Lake and the Trinity Public Utilities District, commenced participation in the California Independent System Operator Corporation ("CAISO") western energy imbalance market ("WEIM"). Participation in the WEIM benefits SMUD by providing it with broader access to balancing resources within the region to help manage its expanding renewable portfolio. In addition, other entities within the BANC Balancing Authority Area began participation in the WEIM on March 25, 2021. See "BUSINESS STRATEGY – Serving SMUD's Customers – *Operational Independence and Local Control*" and "POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements."

In 2022, SMUD's Board formally adopted the 2030 Zero Carbon Plan as SMUD's updated IRP. SMUD filed the approved IRP update with the CEC on September 14, 2022, pursuant to the CEC's IRP guidelines, which called for updating SMUD's IRP filing within five years of SMUD's previous filing of April 29, 2019. SMUD's Zero Carbon Plan built upon the April 2019 IRP and set a goal of zero carbon emissions by 2030. SMUD's next formal IRP process is expected to be completed and filed with the CEC in 2027. See "BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *2030 Zero Carbon Plan*."

The State's carbon cap-and-trade market established pursuant to Assembly Bill 32 ("AB 32") began in 2013. See "DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Greenhouse Gas Emissions*" for a discussion of AB 32 and the State's cap-and-trade program. SMUD anticipates that allowances allocated to SMUD will nearly equal SMUD's compliance obligations under normal water year conditions. Under low water year conditions, SMUD may need to purchase additional allowances to cover its compliance obligations, including carbon obligations related to wholesale energy sales from SMUD's natural gas power plants. As SMUD implements its clean power goals, SMUD expects its need for these allowances to decline.

There is scientific consensus that increasing concentrations of GHG have caused and will continue to cause a rise in temperatures in the State and around the world. The change in the earth's average atmospheric temperature, generally referred to as "climate change," is, among other things, expected to result in a wide range of changes in climate patterns, including increases in the frequency and severity of extreme weather events, including droughts and heat waves, more frequent incidences of wildfires, changes in wind patterns, sea level rise and flooding, any of which alone or in combination could materially adversely affect SMUD's financial results or operations. See also "FACTORS AFFECTING THE REGION" and "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY – Other Factors." As described above, SMUD is actively working to meet its sustainable power supply goals,

reduce its own GHG emissions, and assist the local governments in the territory it serves with their desired GHG reductions. In 2016, SMUD introduced the Pilot Natural Refrigerant Incentive Program, its first customer program providing incentives for GHG reduction in addition to kWh savings. SMUD is a founding member and active participant in the Capital Region Climate Readiness Collaborative, a public private partnership formed to better understand and plan for climate impacts expected in the region. SMUD is also an active member of the United States Department of Energy (the “DOE”) Partnership for Energy Sector Climate Resilience. SMUD regularly reviews scientific findings related to climate change and in 2016 published its Climate Readiness Assessment and Action Plan. In 2024, SMUD is planning to update the Climate Readiness Assessment and Action Plan along with other climate resiliency actions.

Energy Storage Systems. Assembly Bill 2514 (“AB 2514”) requires the Board to re-evaluate energy storage goals every three years. In compliance with AB 2514, the Board established a target of 9 MW of energy storage procurement by December 31, 2020, which SMUD has procured. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Energy Storage Systems*” for further discussion of AB 2514. In September 2020, the Board directed that energy storage forecasts be implemented through SMUD’s IRP process going forward. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*” above for a discussion of SMUD’s IRP. SMUD is also evaluating how to couple utility-scale solar with utility-scale storage to support future system reliability needs and renewable energy goals.

Meeting Peak Load. A significant consideration for SMUD will be how it addresses its system peak load. SMUD has implemented programs and tools, such as advanced metering, energy efficiency options, and TOD rates for residential customers, to help customers manage their costs while helping SMUD reduce its peak load. Analysis of 2022 data showed a reduction of approximately 108 MW, weather adjusted, for residential customers during the TOD peak period (5-8 p.m. local time). SMUD staff will continue to monitor the progress and results of the implementation of TOD rates and will use this information to inform future rate actions and load forecasts. See “BUSINESS STRATEGY – Serving SMUD’s Customers – *Time-of-Day Rates.*”

On September 16, 2021, the Board approved an optional residential Critical Peak Pricing rate (the “Peak Pricing Rate”), which went into effect June 1, 2022. The Peak Pricing Rate is designed to reduce load by increasing the price of energy when the grid is most impacted, up to 50 hours per summer. In exchange, customers on the rate will receive a per kWh discount on summer Off-Peak and Mid-Peak rates. SMUD is also exploring the use of more distributed energy resources and demand response programs that could further reduce SMUD’s system peak.

Operational Independence and Local Control. A key component of SMUD’s business strategy is focused on maintaining its independence in operating and maintaining its resources. As such, SMUD has taken a number of actions to mitigate the potential impacts of various federal and state regulatory actions. For example, in 2002 SMUD established itself as an independent control area (now termed “Balancing Authority”) within the Western Electricity Coordinating Council (“WECC”) region. By removing itself from CAISO’s Balancing Authority area, SMUD became responsible for balancing electric supply and demand within its own service territory. This move substantially reduced fees paid to CAISO, preserved operational flexibility and helped to insulate SMUD from the uncertain regulatory environment and tariff structure of CAISO. In addition to decreased financial risks, this independence also reduced SMUD’s exposure to the impacts of capacity and energy shortages in the CAISO Balancing Authority area. Further, as an independent Balancing Authority, SMUD continued to support the statewide electric grid in events of electrical emergencies requiring rotating outages, such as loss of major transmission lines or equipment, as provided in the statewide emergency plan. By 2006, the SMUD Balancing Authority footprint expanded north to the California-Oregon border and south to Modesto, to include the service areas of the WAPA, MID, Redding and Roseville, and TANC-owned 340-mile 500-kV California-Oregon Transmission Project

(“COTP”). In October 2009, SMUD, with the coordination and cooperation of WAPA, joined the Western Power Pool Reserve Sharing Group, which supports reliability and reduces operating costs. In May 2011, BANC assumed the role of the Balancing Authority, though SMUD continues to oversee operation of the grid on behalf of BANC. BANC members share cost responsibility for balancing authority-related compliance obligations, liabilities, and operations. BANC also serves as an important venue for SMUD and other BANC members to collaborate with respect to operational and market improvements inside the BANC footprint and to preserve their operational independence. See “POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.” On April 3, 2019, SMUD, through its participation in BANC, began operating in the CAISO WEIM, which helps SMUD better manage the integration of renewable energy resources. The CAISO WEIM is a voluntary market, which allows SMUD to maintain its operational independence from the CAISO, while providing SMUD greater access to balancing resources throughout the western region. See “POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.”

Electricity, Natural Gas, and Related Hedging

SMUD continues to utilize a comprehensive and integrated power and fuel supply strategy to acquire a reliable and diversified portfolio of resources to meet existing and future needs. This strategy includes a combination of both physical supply and financial hedging transactions to reduce price risk exposure over a five-year horizon. SMUD’s physical supply arrangements include ownership of power generating resources, as well as a diversified portfolio of power and fuel supply purchase contracts that range in duration, with a mixture of fixed and variable pricing terms.

With regard to the power purchase contracts, SMUD has entered into a series of contracts for the purchase of electricity to supply the portion of its resource needs not already provided by owned resources. SMUD also actively manages its exposure on variable rate electricity purchases, and at times may enter into financial contracts to fix prices by using options to reduce price risk, in each case when warranted by economic conditions. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements.”

With regard to fuel supply contracts, SMUD utilizes a similar strategy of employing financial contracts of various durations to hedge its variable rate fuel supply contracts. As of February 29, 2024, these contracts are forecasted to have hedged the price exposure on approximately 100%, 82% and 81% of SMUD’s anticipated natural gas requirements for 2024, 2025 and 2026, respectively. While the financial effects resulting from the unhedged portions of SMUD’s natural gas requirements are difficult to predict, SMUD’s financial results could be materially impacted. See “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Supply*.”

As provided in SMUD’s natural gas contracts, SMUD may be required to post collateral to various counterparties. As of February 29, 2024, SMUD did not have any collateral posting obligations. A decrease in natural gas prices could result in a collateral posting by SMUD. While the posting of collateral is not an expense for SMUD, it does temporarily encumber unrestricted cash balances.

To hedge against hydroelectric production volatility of SMUD-owned hydroelectric facilities, SMUD implemented a pass-through rate component called the Hydro Generation Adjustment (the “HGA”), and established a Hydro Rate Stabilization Fund (the “HRSF”). Similarly, to hedge against hydroelectric production volatility of non-SMUD-owned hydroelectric facilities, SMUD implemented a HGA and established a WAPA Rate Stabilization Fund (“WRSF”). These rate stabilization funds and rate pass through mechanisms help to offset increased power supply or fuel supply costs in years where precipitation levels at SMUD-owned and non-SMUD-owned hydroelectric facilities are low. See “RATES AND CUSTOMER BASE – Rate Stabilization Funds.”

Managing Risks

SMUD maintains an Enterprise Risk Management (“ERM”) program, a strategic approach to managing enterprise-wide risks as a portfolio, to help reduce the chance of loss, create greater financial stability and protect SMUD resources. It is designed to maintain an early warning system to monitor changes in, and the emergence of, risks that affect the organization’s business objectives. Under the purview of the Enterprise Risk Oversight Committee, composed of executive members and chaired by the Chief Financial Officer, ERM conducts ongoing risk identification, assessments, monitoring, mitigation, risk-based budgeting and reporting. To ensure accountability and oversight, each identified risk is assigned to an executive-level risk owner. Risk status and mitigation efforts are reported monthly to the Board.

Competitive Challenges

In the coming decade, utilities like SMUD may face competition from companies in other industries looking to diversify into the energy sector. Examples of developing competitive areas include retail sale of electricity, distributed electric storage resources, renewable distributed generation (mostly solar in Sacramento), customer installation of fuel cells, third-party electric vehicle charging, home or business automation that enables greater customer participation in energy markets, and third-party provision of energy management software and solutions.

SMUD has a wide range of initiatives to monitor and adapt to changing market conditions and new industry participants. Key areas of focus include:

- Enhancing customer experience. Recognizing the importance of meeting customer expectations, SMUD introduced the Customer Experience Strategy in 2016 to provide customers “value for what they pay” and further strengthen customer loyalty. The initiative is focused on ensuring SMUD has the people, systems, technology, programs and services to consistently meet or exceed customers’ changing expectations. The customer experience is measured via surveys with the goal of achieving 80% of customers agreeing that SMUD provides them with value for what they pay by 2030.
- Restructuring electric rates. In 2017, the Board approved TOD rates as the standard rate for residential customers. The residential rate transition began in the fourth quarter of 2018, and the full transition was completed in the fourth quarter of 2019. All of SMUD’s business customers are also on time-based rates. In 2019, the Board approved a restructuring of commercial rates to collect a greater portion of fixed costs through fixed charges and to better align time periods and prices with energy markets. The transition was completed in the first quarter of 2022. See “RATES AND CUSTOMER BASE – Rates and Charges” and “FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic.”
- Ongoing integrated resource planning. SMUD monitors and updates its integrated resource planning to ensure future sources of energy balance cost, reliability and environmental requirements with the flexibility to meet challenges of changing market and regulatory conditions, customer energy resources, and emerging technologies.

Leveraging Core Competencies

In addition to these initiatives, SMUD is leveraging core competencies to improve industry safety and help communities serve their customers’ energy needs.

Sacramento Power Academy. The Sacramento Power Academy is SMUD’s operational training center providing training support for all of SMUD’s skilled trades professionals. Operating on a 10-acre training facility the academy oversees SMUD’s 14 skilled trades apprenticeships. The academy’s experienced training professionals serve as liaisons and mentors to apprentices progressing through on-the-job training, program testing, night schooling, and extensive training components. The academy also ensures SMUD’s skilled trades professionals are safe and compliant by coordinating and delivering annual regulatory and safety training. The academy is also a workforce development hub utilized by SMUD to increase awareness of and interest in skilled trades careers at SMUD, in SMUD’s community, and in the utility industry.

Community Energy Services. In 2002, Assembly Bill 117 was passed to establish Community Choice Aggregation in the State by authorizing Community Choice Aggregators (“CCAs”) to aggregate customer electric load and purchase electricity for customers. SMUD’s Community Energy Services department was established in 2017 to support organizations with values closely aligned with SMUD’s values, while also generating additional revenue for SMUD. CCA programs are proliferating in the State thanks to support for expanding renewable energy use and desire for local control particularly for electricity procurement. There are numerous CCAs operating in the State, and more are anticipated to launch in the future. CCAs are responsible for procuring wholesale power, setting the generation rate, and staffing a call center to handle opt-outs and questions about the power portfolio. The local investor-owned utility (“IOU”) continues to deliver electricity from the electric grid, maintain its electric infrastructure, bill customers and collect payments.

In October 2017, SMUD was selected by the governing board of Valley Clean Energy (“VCE”) to provide technical, energy and support services, including data management and call center services, wholesale energy services, and business operations support, to VCE for a five-year term expiring May 31, 2023. SMUD and VCE recently executed a new contract for data management, contact center, consulting and debt collection services that expires on December 31, 2028. VCE is a joint powers agency formed in 2016 by the City of Woodland, the City of Davis and Yolo County to implement a local CCA program. The service territory expanded to include the City of Winters in 2021. The mission of VCE is to deliver cost-competitive clean electricity, product choice, price stability, energy efficiency, and greenhouse gas emissions reductions to its customers in Yolo County. VCE began electric services to its customers in the summer of 2018, giving Yolo County residents a choice between two electricity providers, VCE and PG&E.

In November 2017, SMUD was selected by the governing board of East Bay Community Energy (“EBCE”) to provide call center and data management services for a three-year term beginning in January 2018. SMUD signed a new contract with EBCE in January 2022 for call center and data management services for an additional three-year term. EBCE recently changed its name to Ava Community Energy (“Ava”). Ava is a joint powers agency formed in 2016 by the cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Oakland, Piedmont, San Leandro and Union City in Alameda County to implement a local CCA program. Ava expanded its territory to the cities of Pleasanton, Newark, and Tracy in April 2021.

In June 2019, SMUD was selected by the governing board of Silicon Valley Clean Energy (“SVCE”) to provide program services to help local SVCE communities reduce carbon pollution while delivering engaging customer experiences. SVCE programs are focused on grid integration, as well as electrifying transportation, buildings and homes. This contract was extended through September of 2024. In June 2023, SMUD was selected through a competitive process as SVCE’s concierge service vendor for three years. In December 2023, SMUD was again selected through a competitive process as SVCE’s programs administrator for five years. SVCE is a joint powers agency formed in 2016 by the cities of Campbell, Cupertino, Gilroy, Lost Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill,

Mountain View, Saratoga, Sunnyvale and Unincorporated Santa Clara County to implement a local CCA program.

In July 2022, SMUD was selected by the governing board of Marin Clean Energy (“MCE”) to provide data management, billing, data analytic and system assessment services to MCE. MCE is a joint powers agency formed in 2010 and represents 37 member communities across four Bay Area counties: Contra Costa, Marin, Napa and Solano.

In September 2022, SMUD was selected through a competitive process by the governing board of Sonoma Clean Power (“SCP”) to provide market research services to SCP. In January of 2023, SMUD was selected to provide strategic consulting services, providing recommendations related to programs and marketing. SCP is a joint powers agency that serves Sonoma and Mendocino counties.

While CCAs have had success in the State, they are susceptible to business, regulatory and other risks that could lead to a financial loss and/or result in a cessation of operations for the CCA. These risks could extend to a CCA’s counterparties, including SMUD. SMUD has made an effort to identify and mitigate potential counterparty risks to the extent possible in service agreements with the CCAs described above. SMUD may pursue opportunities to provide similar services to additional CCAs in the future. SMUD management does not expect its current arrangements to have a material adverse impact on SMUD’s financial position, liquidity or results of operations.

FACTORS AFFECTING THE REGION

Precipitation Variability

SMUD uses a precipitation measuring station located at Fresh Pond, California to approximate available water supply to SMUD’s Upper American River Project (the “UARP”) hydropower reservoirs. As of January 31, 2024, precipitation at Fresh Pond, California totaled 21 inches for the October-September hydropower water supply period. This is 75% of the 50-year rolling median of 28 inches. Total reservoir storage in the UARP hydropower reservoirs was 238 thousand acre-feet as of January 31, 2024, which was about 63% of capacity and approximately 6% above the historical average. SMUD manages its reservoirs to maximize water storage going into the summer season, which preserves generating capacity during SMUD’s high load months and ensures that SMUD meets its UARP FERC license requirements, including requirements for recreational and environmental flows.

There can be wide swings in precipitation from year to year. In years with below average rainfall, SMUD may have to generate or purchase replacement energy at additional cost. To hedge against variations in the volume of energy received from SMUD-owned UARP hydroelectric resources, SMUD uses the HRSF to help offset increased power supply or fuel supply costs. See “RATES AND CUSTOMER BASE – Rate Stabilization Funds.”

SMUD is also exposed to precipitation variability through its contract with the WAPA. In an average water year this contract provides roughly 661 gigawatt hours (“GWh”) of power. WAPA’s actual deliveries are based on hydroelectric generation (minus energy use for pumping) at Central Valley Project reservoirs in Northern California, which varies based on annual precipitation patterns, water deliveries for agriculture, and flow requirements in the Sacramento-San Joaquin River Delta. Unlike the UARP, SMUD does not monitor precipitation stations to approximate power deliveries under the WAPA contract, and instead relies on a forecast of power deliveries from WAPA. As of January 31, 2024, WAPA has forecasted power deliveries of 703 GWh for 2024, approximately 6% more than an average water year. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – *Western Area Power Administration.*”

Wildfires

General. Wildfires in the State have become increasingly common and destructive. Frequent drought conditions and unseasonably warm temperatures have increased, and could further increase, the possibility of wildfires occurring in areas where SMUD maintains generation, transmission and distribution facilities. The number of diseased and dead trees has increased, and could further increase, this possibility. As a result, SMUD faces an increased risk that it may be required to pay for wildfire related property damage or personal injuries, fines and penalties, some of which may not be covered by insurance (including costs in excess of applicable policy limits), or may be disputed by insurers, and could be material. In addition, a significant fire or fires in SMUD’s generation, transmission or service area could result in damage or destruction to SMUD’s facilities, result in a temporary or permanent loss of customers or otherwise materially increase SMUD’s costs or materially adversely affect SMUD’s ability to operate its Electric System or generate revenues.

SMUD’s service territory is located within Sacramento County, which is located outside the California Public Utilities Commission (the “CPUC”) high fire threat areas established in 2018. However, as described below, SMUD’s UARP facilities and certain of SMUD’s and TANC’s transmission facilities are within CPUC high fire threat areas. In addition, as described below, certain portions of SMUD’s service territory are located within the California Department of Forestry and Fire Protection (“Cal Fire”) Fire Protection and Resource Assessment Program (“FRAP”) Moderate, High and Very High Fire Hazard Severity Zones. SMUD’s exposure to liability for damages related to its UARP facilities, which are located within high fire threat areas in El Dorado County, is reduced due to risk mitigation measures adopted by SMUD and the low number of inhabitants and structures near the UARP facilities (See “Wildfire Mitigation” below).

SMUD continues to take responsible action to minimize its exposure to liability from wildfires; however, under current State law, utilities can be held liable for damages caused by wildfires sparked by their equipment or other facilities regardless of whether the utility was negligent or otherwise at fault. PG&E and other major IOUs in the State have experienced credit rating downgrades as a result of potential wildfire liability exposure, which may have implications for the electric market generally. At this time the full extent of SMUD’s potential exposure to wildfire risk is unknown.

Distribution (SMUD Service Territory). State law requires Cal Fire to classify areas in the State based on the severity of the fire hazard that is expected to prevail there. These areas or “Fire Hazard Severity Zones” are based on factors such as fuel (material that can burn), slope and the expected chance of burning. There are three Fire Hazard Severity Zones (Moderate, High and Very High) based on increasing fire hazard. Portions of SMUD’s service territory are located within these Fire Hazard Severity Zones. SMUD has assessed its service territory based on Cal Fire’s FRAP map, adopted in 2007; the following table illustrates SMUD’s assessment of the approximate extent of its service territory and retail customer base located within the three Fire Hazard Severity Zones as of March 2019.

Fire Hazard Severity Zone	Moderate	High	Very High
Acres of SMUD Service Area	231,816	2,337	1,061
% of Total SMUD Service Area	40.6%	0.4%	0.2%
Number of Retail Customers	53,621	4,285	148
% of Total Retail Customers	7.7%	0.6%	0.0%

Transmission (Outside of SMUD Service Territory). In 2018, the CPUC approved a new statewide fire map that identifies areas of elevated and extreme wildfire risk from utility-associated assets located throughout the State. SMUD directly participated in the development of the CPUC’s statewide fire map. In connection with the development of the CPUC’s statewide fire map, a peer review and a team of independent nationwide experts led by Cal Fire affirmed that SMUD’s electric service area is properly located outside of these elevated (“Tier 2”) and extreme (“Tier 3”) high fire threat areas; however, SMUD’s UARP facilities are located within both Tier 2 and Tier 3 areas. According to the CPUC, Tier 2 fire-threat areas are areas where there is an elevated wildfire risk from utility assets and Tier 3 fire-threat areas are areas where there is an extreme risk from utility assets. As of June 8, 2021, approximately 37 right-of-way miles of SMUD’s transmission lines are in Tier 2 fire-threat areas and approximately 19 right-of-way miles of SMUD’s transmission lines are in Tier 3 fire-threat areas. SMUD is also a member of TANC. As of July 2022, approximately 116.3 right-of-way miles of TANC’s transmission lines are in Tier 2 fire-threat areas and approximately 4.5 right-of-way miles of TANC’s transmission lines are in Tier 3 fire-threat areas. In accordance with its FERC license, SMUD adheres to a FERC-approved Fire Prevention and Response Plan for its UARP facilities. On May 17, 2018, in accordance with State law, SMUD’s Board of Directors determined that the UARP area may have a “significant risk of catastrophic wildfire” resulting from overhead electric facilities and that SMUD’s FERC-approved UARP Fire Prevention and Response Plan meets requirements for presenting wildfire mitigation measures to the Board for its approval.

Wildfire Mitigation. In response to potential wildfire risk, SMUD has implemented and is continuing to implement a series of measures intended to prevent wildfires from occurring, minimize the spread of any fire that does occur and improve the resiliency of its system. These measures include an increase in the degree of sophistication of fuel reduction inside and adjacent to rights-of-ways; installation of Cal Fire-approved exempt material to reduce the risk of sparking; enhanced inspection and maintenance programs; increased use of ignition-resistant construction, including covered conductors and undergrounding of conductors; increased monitoring of and identified responses to fire conditions, including operational procedures for the de-energization of lines during high fire conditions; and elimination of automatic reclosers on SMUD’s transmission lines and on SMUD’s distribution lines in certain areas during fire season.

SMUD’s proactive approach to vegetation management has been expanded to include the use of advanced technologies such as Light Detection and Ranging (“LiDAR”), ortho and oblique imagery that is used to pinpoint tree health and/or condition that may not yet be visible to the naked eye. In addition, SMUD has installed additional weather stations in transmission corridors and substations for increased situational awareness and has continued coordination and collaboration with local agencies and first responders as well as vulnerable populations.

State legislation enacted in 2018 and 2019 (SB 901 and AB 1054, respectively) requires publicly owned utilities (“POUs”) to prepare and present Wildfire Mitigation Plans to their governing boards by January 1, 2020, and annually thereafter. SB 901 requires POUs, including SMUD, before January 1, 2020, and annually thereafter, to prepare a wildfire mitigation plan and present it in a public meeting to their governing board. SB 901 requires POU’s to accept comments on the wildfire mitigation plan from the public, other local and State agencies, and interested parties, and to verify that the plan complies with all applicable rules, regulations, and standards, as appropriate. The bill requires a qualified independent evaluator to review and assess the comprehensiveness of its wildfire mitigation plan and present its report to the board in a public meeting. AB 1054 created a new Wildfire Safety Division within the CPUC to prioritize wildfire safety throughout the State, and established an appointed Wildfire Safety Advisory Board (“WSAB”) to advise and make recommendations relating to wildfire safety to this new Division. For POUs, the bill requires submittal of annual wildfire mitigation plans to the WSAB for review and advisory opinions relating to the content and sufficiency of the plans.

SMUD assembled an enterprise-wide team of subject-matter experts to prepare its plan in compliance with this legislation. SMUD's initial Wildfire Mitigation Plan ("WMP") was adopted by the Board in the fourth quarter of 2019, after circulation for public comment and review of the comprehensiveness of the plan by a qualified independent evaluator. The WMP and evaluator's report were submitted to the WSAB in 2020.

SMUD reviews its WMP each year, presenting the updated plan to the Board for adoption at duly noticed public meetings. The updated plans and evaluator reports are submitted to the WSAB for advisory opinion and recommendations. SMUD responds to the WSAB's comments regarding SMUD's WMP as part of its WMP process. SMUD will continue to annually review and update its WMP, conducting a comprehensive review at least every third year.

SMUD recently completed a comprehensive review and update of its WMP after soliciting public input and independent evaluation. The 2023-2025 WMP was adopted by the Board on June 15, 2023, and duly submitted to the WSAB.

Wildfire Insurance. Wildfires both in California and nationally have not only increased potential liability for utilities, but have also adversely impacted the insurance markets, leading to higher costs for coverage; coverages becoming prohibitively expensive; limited or restricted coverage to certain types of risks; or coverage at insufficient levels. SMUD most recently renewed its general and wildfire liability insurance coverage on June 15, 2023, increasing the coverage limit by \$25 million to \$275 million. SMUD increased the commercially insured portion of its wildfire coverage program from \$176 million to \$212.5 million and maintained the self-insured layers and quota share portions of the coverage at \$62.5 million.

In addition, it is expected that SMUD will have a portion of the \$500 million aggregate principal amount of its commercial paper and line of credit program to provide operational flexibility in the event of the occurrence of a wildfire or other operational event. However, SMUD has not covenanted to maintain the availability of the commercial paper program and line of credit program for these purposes and no assurances can be given that the commercial paper and line of credit program will be available at the time of, or during, such an event.

August 2020 Heat Wave

The State experienced a period of prolonged above average temperatures from August 14, 2020 through August 18, 2020. The CAISO was forced to institute rotating electricity outages in the State during this extreme heat wave. SMUD, as a member of BANC, and being outside of the CAISO did not have to implement any planned power disruptions. Additionally, SMUD was able to support the CAISO during some hours of the heat wave with both requested emergency assistance and wholesale market sales. SMUD's peak demand between August 14, 2020 and August 18, 2020, varied between 2,874 MW and 3,057 MW, well below SMUD's record peak of 3,299 MW.

September 2022 Heat Wave

The State experienced a period of prolonged above average temperatures from September 5, 2022 through September 8, 2022. On September 6, 2022, SMUD experienced its second highest peak demand of 3,263 MW. SMUD did not have to implement any planned power disruptions.

Storm Damage

In January 2023, SMUD experienced a series of winter storms that brought heavy rains and high winds causing damage to SMUD's grid and widespread outages for SMUD's customers. By the time the

storm response was complete, SMUD had experienced the largest mobilization of personnel and restoration crews in its history. SMUD incurred costs related to removing downed trees, restoring power from downed poles and broken lines, replenishing inventory, communicating with and providing assistance to customers, maintaining IT systems, and coordinating with local emergency agencies. SMUD is pursuing claims with Federal and State agencies to attempt to recover certain of SMUD's costs related to the storms. The material financial impacts have been reflected in SMUD's audited financial statements for the years ended December 31, 2023 and December 31, 2022, [which are included in APPENDIX B].

Cosumnes Power Plant Outage

On June 5, 2022, the Cosumnes Power Plant (as defined herein) was shut down due to a ground fault in the Steam Turbine Generator ("STG") stator. The ground fault was caused by delamination of the insulation on one of the through bolts. Damage from the ground fault resulted in a full rewind and restack of the stator core, replacement of all stator through bolts, and a full rewind of turbine rotor. The Cosumnes Power Plant repairs were completed in February 2023 and the plant returned to service on March 5, 2023. During the extended outage, SMUD shifted generation to the other local gas-fired plants and the Sutter Energy Center and procured additional energy and resource adequacy capacity. SMUD also requested and received approval from the California Air Quality Board and California Energy Commission to operate one or both of the gas turbines without the STG. During the September 2022 heatwave, both of the gas turbines at the Cosumnes Power Plant were operated without the STG, providing 270 MW at peak.

To mitigate the financial impact of unplanned outages from its thermal assets, SMUD carries commercial property insurance with a business interruption endorsement. At the time of the loss, the coverage provided up to \$30.8 million of business interruption recovery per month at the Cosumnes Power Plant, with a sub-limit of \$310 million over any 18-month period. During the policy period, claims were subject to a \$5 million equipment damage deductible and a 60-day business interruption claims waiting period.

SMUD has settled the equipment damage portion of the loss for \$18.6 million, resulting in a \$13.6 million recovery. The business interruption portion of the claim remains in process, with SMUD receiving a \$50 million advance in December of 2022. As of January 2024, the carriers have confirmed an additional \$51 million in undisputed recovery, which is anticipated to be received in the first quarter of 2024. Thus far, SMUD has recovered \$114.6 million of the loss and will continue to work toward full settlement of the disputed portion of the claim, which is approximately \$68 million.

Impacts from COVID-19 Pandemic

While the impact of the COVID-19 pandemic on SMUD has lessened since the height of the pandemic in 2020, SMUD is still experiencing impacts from the pandemic. However, compared to weather adjusted load levels, SMUD's overall load is near or above pre-pandemic levels.

Part of the governmental response to the economic consequences of the pandemic required utility providers (including SMUD) to provide additional grace periods and flexible payment plans for the payment of utility bills or to refrain from pursuing collection remedies for unpaid bills for a period of time. SMUD also implemented a no-shutoff policy through January 2022 under which SMUD did not disconnect power to a customer for non-payment of their electric bill. Beginning in February 2022, SMUD resumed its normal payment, late fee, and disconnection process and began disconnections of unpaid accounts in late April 2022. As a result, SMUD has experienced an increase in delinquencies for customer electric accounts versus pre-pandemic levels. In December 2021, SMUD received \$41 million from the California Arrearage Payment Program ("CAPP") initial funding, and an additional \$9.9 million in 2022. All funds were applied to delinquent balances. As of December 31, 2023, the total delinquencies for customer electric

accounts were \$38.2 million, after the CAPP credit, which is an increase from the February 2020 balance of total delinquencies for customer electric accounts of \$16.9 million. The financial impacts stemming from delinquent accounts have been accounted for in SMUD's audited financial statements for the preceding years. Any successful recovery of delinquent accounts will contribute to an increase in net income.

SMUD also paused the recertification process for existing customers in SMUD's low-income discount program during the pandemic. The number of customers participating in the low-income assistance program increased by 16,407, or approximately 22% from February 2020 to December 2023. SMUD has resumed the recertification process for existing customers in the low-income discount program in 2023.

While the impacts of the COVID-19 pandemic on SMUD have lessened, if the pandemic and its consequences again become more severe or another similar event occurs, the impacts on SMUD's financial results and operations could be material.

RATES AND CUSTOMER BASE

Rates and Charges

SMUD's Board of Directors has autonomous authority to establish the rates charged for all SMUD services. Unlike IOUs and some other municipal utility systems, retail rate and revenue levels are not subject to review or regulation by any other federal, State or local governmental agencies. Changes to SMUD rates only require formal action by the Board of Directors after two public workshops and a public hearing. SMUD is not required by law to transfer any portion of its collections from customers to any local government. SMUD typically reviews and sets rates on a two-year cycle.

2019 Rate Action.

On June 24, 2019, the Board approved a 3.75% rate increase effective January 1, 2020, a 3.00% rate increase effective October 1, 2020, a 2.50% rate increase effective January 1, 2021, and a 2.00% rate increase effective October 1, 2021, for all customer classes. Additionally, the Board approved a restructuring of the commercial rates, including new time periods and an overall increase in the fixed bill components, such as the System Infrastructure Fixed Charge and demand charges, and a corresponding decrease in energy charges, making the restructuring revenue neutral by rate category. To minimize bill impacts, rate categories will be restructured over an eight-year period.

2021 Rate Action.

On September 16, 2021, the Board approved a 1.5% rate increase effective March 1, 2022 and a 2.0% rate increase effective January 1, 2023 for all customer classes. Additionally, the Board approved the Solar and Storage Rate, the optional residential Peak Pricing Rate, and updates to certain schedules of SMUD's Open Access Transmission Tariff ("OATT"). The Board also approved a new timeline for the commercial rate restructure transition, and all impacted commercial customers were transitioned to the new rates by the end of the first quarter of 2022.

SMUD also implemented a solar interconnection fee based on the size of solar interconnection and supporting programs such as battery incentives, incentives to enroll in SMUD's Peak Pricing Rate, battery incentives for Virtual Power Plants, and a program to bring the benefits of solar to under-resourced multi-family communities. These programs and fees are not subject to Board approval.

2023 Rate Action.

On September 21, 2023, the Board approved a 2.75% rate increase effective January 1, 2024, a 2.75% rate increase effective May 1, 2024, a 2.75% rate increase effective January 1, 2025, and a 2.75% rate increase effective May 1, 2025 for all customer classes. The Board also approved establishing the Energy Assistance Program Rate (“EAPR”) Rate Stabilization Fund, which will provide an additional discount to those low-income customers with the greatest need. The discount will be funded with discretionary, non-retail rate revenue, as to not have an impact on any future required rate changes. There is currently pending litigation concerning the adoption of the 2023 rates. See “LEGAL PROCEEDINGS – Proposition 26 Lawsuit.”

Rate Stabilization Funds

The Rate Stabilization Fund (“RSF”) is maintained by SMUD to reduce the need for future rate increases when costs exceed existing rates. At the direction of the Board, amounts may be either transferred into the RSF (which reduces revenues) or transferred out of the RSF (which increases revenues). The Board authorizes RSF transfers on an event driven basis. The RSF includes funds to hedge variations in the volume of energy received from WAPA hydroelectric generation, variation in AB 32 revenue and variations in Low Carbon Fuel Credit (“LCFS”) revenue. As of December 31, 2023, the balance in the RSF was \$115.8 million, which is approximately 7.2% of annual retail revenue.

Effective July 2008, SMUD implemented the HGA, which is a pass-through rate component to deal with variations in hydroelectric generation from the UARP (see “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Hydroelectric*”). The HGA is designed to increase revenues in dry years when SMUD must buy power to replace hydroelectric generation and return money to the HRSF in wet years when SMUD has more hydroelectric generation than expected. Each year SMUD determines the impact of precipitation variances on projected hydroelectric generation from the UARP. When the precipitation variance results in a deficiency of hydroelectric generation from the UARP, transfers from the HRSF, which was created as a component of the RSF, to SMUD’s available cash, will be made in an amount approximating the cost to SMUD of replacement power (up to 4% of revenues) until the balance in the HRSF is zero. When the precipitation variance results in a projected surplus of hydroelectric generation from the UARP, deposits will be made into the HRSF in an amount approximating the positive impact to SMUD from the surplus hydroelectric generation (up to 4% of revenues) until the balance in the HRSF is equal to 6% of budgeted retail revenue. If the balance in the HRSF is not sufficient to cover transfers that would otherwise be made in the event of a projected deficiency in UARP hydroelectric generation, a 12-month HGA surcharge will automatically be included on customers’ electric bills at a level that generates up to 4% of retail revenue. If the balance in the HRSF is equal to 6% of budgeted retail revenue on any precipitation variance calculation date and the precipitation variance results in a projected UARP hydroelectric generation surplus, the positive impact of the surplus may be used for other purposes at staff’s recommendation, with the approval of the Board, including returned to customers through an electric bill discount up to 4% of retail revenue. SMUD calculates HRSF transfers based on an April-March (water year) precipitation period at Fresh Pond, California. This precipitation station is used to approximate available water supply to SMUD’s UARP hydropower reservoirs. As of January 31, 2024, and based on the current HRSF water year precipitation forecast, SMUD anticipates transferring \$20.8 million out of the HRSF in April 2024.

In September 2023, SMUD added a pass-through rate component to deal with variations in hydroelectric generation from WAPA. Each year SMUD determines the WAPA Energy Delivery Variance (“EDV”) based on forecasted energy delivery minus the actual energy delivery. When the EDV variance is positive, transfers from the WRSF, which was created as a component of the RSF, to SMUD’s available cash, will be made in an amount approximating the cost to SMUD of replacement power (up to 2% of

revenues) until the balance in the WRSF is zero. If the balance in the WRSF is not sufficient to cover transfers that would otherwise be made in the event of a projected deficiency in WAPA hydroelectric generation, a 12-month HGA surcharge will automatically be included on customers' electric bills at a level that generates up to 2% of retail revenue. When the EDV variance is negative, deposits will be made into the WRSF in an amount approximating the positive impact to SMUD from the surplus hydroelectric generation (up to 2% of revenues) until the balance in the WRSF reaches a maximum of 4% of budgeted retail revenue. Any deposit amount that exceeds the WRSF maximum of 4% of budgeted retail revenue, may be used for other purposes with the approval of the Board, including returned to customers through an electric bill discount up to 2% of retail revenue. SMUD calculates WRSF transfers based on a forecasted delivery as provided by WAPA. As of January 31, 2024, and based on the current WRSF water year precipitation forecast, SMUD anticipates transferring \$5.7 million into the WRSF in April 2024.

As of December 31, 2023, the balance in the RSF, not including the HRSF, was \$115.8 million, which is approximately 7.2% of annual retail revenue. SMUD transferred approximately \$65.4 million into the HRSF from SMUD's available cash in April 2023 due to above average precipitation, which increased the balance in the HRSF from \$31 million to approximately \$96.4 million. Although the HRSF and the subaccount of the RSF that hedge variations in the volume of energy received from non-SMUD hydroelectric generation currently have positive balances, below average precipitation could deplete the HRSF and RSF balances to zero.

Low Income Discount

As of December 2023, approximately 91,407 customers received the low-income discount offered by SMUD, which represents approximately 16% of all residential customers. As a result of the COVID-19 pandemic, SMUD suspended recertification during the pandemic. In 2023 SMUD restarted the customer recertification. In 2023, the total discount was approximately \$32.7 million. As a result of the effects of the COVID-19 pandemic and related economic downturn, SMUD experienced an increase in low-income discount applicants. See "FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic."

While the low-income discount has provided substantial benefits to low-income customer bills for years, multiple economic variables, such as inflation and rate increases, have had disproportionately negative impacts on low-income customers, particularly those in the 0-50% Federal Poverty Level ("FPL"). In 2023, SMUD established an EAPR Rate Stabilization Fund ("ERSF") to provide an additional discount to the electricity usage charge up to an established maximum discount ("ERSF Additional Discount") for customers in the 0-50% FPL. The ERSF is funded by discretionary non-retail rate revenue, reviewed on an annual basis, and the specific monthly ERSF Additional Discount is set before the year the value is in effect. SMUD expanded its programs and services starting in 2016 to help customers with energy assistance, home improvement packages and education. SMUD is creating tailored solutions to best meet the needs of low-income customers. These solutions include free solar panels and inspecting homes to identify energy saving and fuel switching opportunities. As of December 2023, SMUD has performed 30,000 energy retrofits and, in partnership with Grid Alternatives (a non-profit organization that focuses on implementing solar power and energy efficiency for low-income families), 230 customers have benefited from free solar installations. Forty-eight additional homes received solar and energy efficiency through a partnership with Habitat for Humanity of Greater Sacramento. As part of SMUD's Zero Carbon Plan and the focus on building electrification, SMUD has also been ramping up electrification investments for low-income customers. Since 2019, SMUD has assisted more than 2,600 households with electrification upgrades. Additionally, SMUD has installed nearly 450 electric vehicle chargers and more than 400 electric vehicle circuits in low-income households or areas that serve low-income customers.

Rate Comparisons

SMUD’s rates remain significantly below those of PG&E and other large utilities throughout the State. The following table sets forth the average charges per kWh by customer class for both SMUD and PG&E. PG&E’s rates reflect their recently approved rate increase effective January 1, 2024.

AVERAGE CLASS RATES

	SMUD Rates (cents/kWh)⁽¹⁾	PG&E Rates (cents/kWh)⁽²⁾	Percent SMUD is Below PG&E⁽³⁾
Residential – Standard	18.98¢	44.67¢	57.5%
Residential – Low Income	13.28¢	28.31¢	53.1%
All Residential	18.00¢	37.78¢	52.4%
Small Commercial (Less than 20 kW)	18.33¢	44.17¢	58.5%
Small Commercial (21 to 299 kW)	16.98¢	43.80¢	61.2%
Medium Commercial (300 to 499 kW)	15.94¢	39.95¢	60.1%
Medium Commercial (500 to 999 kW)	14.93¢	34.52¢	56.7%
Large Commercial (Greater than 1,000 kW)	13.30¢	25.06¢	46.9%
Lighting – Traffic Signals	14.45¢	43.60¢	66.9%
Lighting – Street Lighting	15.73¢	56.32¢	72.1%
Agriculture	15.91¢	39.50¢	59.7%
System Average	16.70¢	36.57¢	54.3%

⁽¹⁾ Projected 2024 average prices for SMUD with rates effective January 1, 2024 and May 1, 2024.

⁽²⁾ PG&E average prices in 2024 reflect rates effective January 1, 2024, per Advice Letter 7116-E dated December 29, 2023.

⁽³⁾ The rates in the Average Class Rates table are calculated by dividing the total revenue of each class by the total usage of that class in kWh. The actual savings per customer will vary based on their electricity consumption.

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The following table shows a comparison of SMUD’s charges for the average residential usage of 750 kWh per month (based on an average of summer and non-summer months) and charges of seven similar neighboring or largest utilities in the State.

STATEWIDE COMPARISON–RESIDENTIAL SERVICE

	Monthly Billing Charge 750 kWh⁽¹⁾⁽²⁾	Percent SMUD is (Below)/Above Utility
Sacramento Municipal Utility District	\$134.88	
Pacific Gas & Electric Company	\$345.42	(61.0%)
Roseville Electric Utility	\$122.20	10.4%
Turlock Irrigation District	\$123.67	9.1%
Modesto Irrigation District	\$162.66	(17.1%)
Los Angeles Dept. of Water & Power	\$185.52	(27.3%)
Southern California Edison Company	\$269.57	(50.0%)
San Diego Gas and Electric Company	\$294.74	(54.2%)

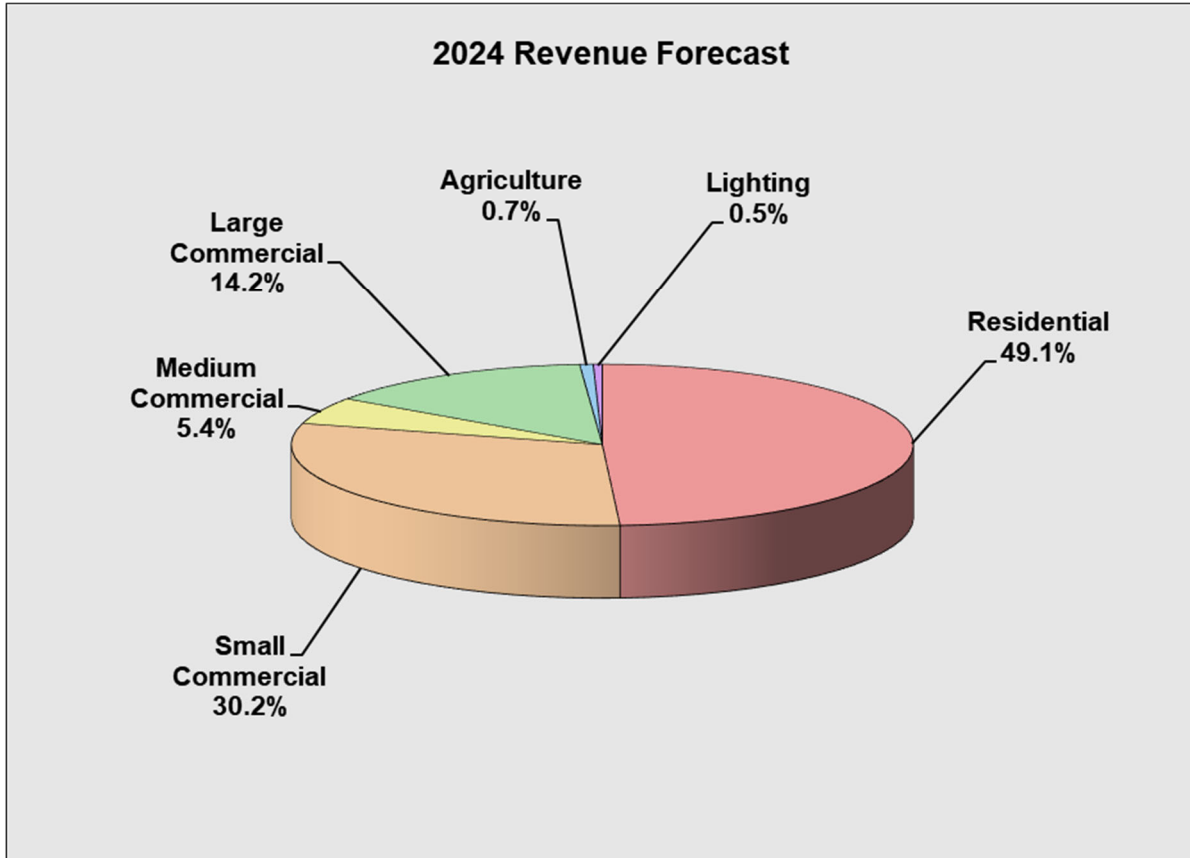
⁽¹⁾ Per individual utility’s published schedules as of January 1, 2024.

⁽²⁾ Average usage of theoretical customer using 750kWh per month.

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Allocation of Revenue by Customer Class

The following chart sets forth the forecast percentage of SMUD revenues from billed sales associated with each customer class.



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Customer Base; Largest Customers

A stabilizing influence on SMUD's revenues is that a substantial proportion is derived from residential customers (49.2% in 2023). Historically, revenue from commercial and industrial consumption has been more sensitive to economic fluctuation. Furthermore, SMUD has no dominant customers that account for a significant percentage of annual revenues. In 2023, no single customer contributed more than 3% of revenues. The top ten customers generated approximately 9% of revenues and the top 30 generated approximately 15% of revenues. The following table presents information on SMUD's top ten customers as of December 31, 2023.

SMUD'S LARGEST CUSTOMERS (As of December 31, 2023)

Customer Type	Annual Revenue (\$ millions)	% of Total Revenue
Government	33.67	2.10%
Government	32.04	2.00%
Government	15.28	0.95%
Technology	13.07	0.82%
Technology	11.05	0.69%
Communications	9.68	0.60%
Industrial Gases	9.28	0.58%
Government	8.27	0.52%
Retail	7.56	0.47%
Communications	7.32	0.46%
Top 10 Total	147.22	9.19%

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POWER SUPPLY AND TRANSMISSION

Power Supply Resources

The following table sets forth information concerning SMUD’s power supply resources as of December 31, 2023. Capacity availability reflects expected capacities at SMUD’s load center, as well as entitlement, firm allocations and contract amounts in the month of July, which is generally SMUD’s peak month.

**POWER SUPPLY RESOURCES
(As of December 31, 2023)**

Source:	Capacity Available (MW)⁽¹⁾
Generating Facilities:	
Upper American River Project – Hydroelectric	701
Solano Wind Project – Wind ⁽²⁾	70
Hedge Battery ⁽²⁾	4
Sub-total:	775
Local Gas-Fired Plants:	
Cosumnes Power Plant	576
Carson Project.....	103
Procter & Gamble Project.....	166
McClellan	72
Campbell Soup Project	170
Sub-total:	1,087
Purchased Power:	
Western Area Power Administration (WAPA) ⁽³⁾ ⁽⁴⁾	395
Grady – Wind ⁽²⁾	25
Avangrid (Iberdrola) (PPM) – Wind ⁽²⁾	21
Feed-in-Tariff Photovoltaic – Solar ⁽²⁾	37
Rancho Seco Solar ⁽²⁾	69
NTUA Navajo Drew Solar ⁽²⁾	50
Great Valley – Solar ⁽²⁾	35
Wildflower Solar ⁽²⁾	4
Calpine Geysers – Geothermal	100
CalEnergy – Geothermal	26
Patua (Gradient/Vulcan) – Geothermal.....	12
Other Long-Term Contracts.....	17
ELCC Portfolio Adjustment ⁽²⁾	120
Sutter Calpine Thermal	258
Firm Contract Reserves ⁽⁴⁾	20
Committed Short-Term Purchases ⁽⁵⁾	375
Uncommitted Short-Term Purchases	29
Sub-total:	1,590
Total	3,452

(1) Available capacity is the net capacity available to serve SMUD’s system peak load during the month of July.
 (2) Capacity values for wind, solar, and storage projects shown are based on resource effective load carrying capability (“ELCC”) modeling.
 (3) Total includes SMUD’s Base Resource share and WAPA Customer allocations.
 (4) Assumes firm reserves of 5% are included.
 (5) Committed Short-Term Purchases are primarily purchased on a year-ahead to season-ahead basis from various sources.

Note: Totals may not add due to rounding.

Power Generation Facilities

Hydroelectric. The UARP consists of three relatively large storage reservoirs (Union Valley, Loon Lake and Ice House) with an aggregate water storage capacity of approximately 400,000 acre-feet and eight small reservoirs. Project facilities also include eight tunnels with a combined length of over 26 miles and eight powerhouses containing 11 turbines. In addition to providing clean hydroelectric power and operating flexibility for SMUD, the UARP area provides habitat for fish and wildlife and a variety of recreational opportunities, including camping, fishing, boating, hiking, horseback riding, mountain biking and cross-country skiing.

The combined capacity of the UARP is approximately 685 MW at SMUD's load center in Sacramento. Under current licensing and mean water conditions, these facilities are expected to generate approximately 1,600 GWh of electric energy annually, which represents approximately 15% of SMUD's current average annual retail energy requirements. In 1957, the Federal Power Commission (predecessor agency to FERC) issued a license to SMUD for the UARP. This 50-year license was subsequently amended to add and upgrade facilities and now includes all segments of SMUD's hydroelectric facilities located on the South Fork of the American River and its tributaries upstream from the Chili Bar Project (described below). On July 23, 2014, FERC issued to SMUD a new 50-year license for the UARP.

On November 9, 2016 FERC issued an Order authorizing SMUD to construct the South Fork Powerhouse downstream of the UARP's Slab Creek Dam. Construction was substantially completed in the fall of 2020, and the new powerhouse was placed into operation on October 25, 2022, adding 1.8 MW of generation to the UARP's overall capacity.

On June 16, 2021, pursuant to Board authorization, SMUD acquired the Chili Bar Hydroelectric Project which consists of a 7 MW powerhouse, reservoir, dam and spillway, north of Placerville on the South Fork of the American River for approximately \$10.4 million (the "Chili Bar Project"). The Chili Bar Project is immediately downstream from the UARP and operates as the regulating reservoir for the UARP's largest powerhouse. Owning the UARP and the Chili Bar Project enables SMUD to operate the two projects with a holistic approach to license compliance and generation efficiency.

Solano 2 Wind Project. SMUD owns and operates an 87 MW wind project, located in Solano County, known as Solano 2. Solano 2 consist of 29 wind turbine generators ("WTGs") rated at 3 MW each. Energy from the project is collected at 21 kV and transmitted over a dedicated 3-mile overhead system to the SMUD-owned Russell substation. At the Russell facility, the energy is transformed to 230 kV and interconnected to PG&E's Birds Landing Switching Station. Energy deliveries are scheduled through the CAISO.

Solano 3 Project. In 2011 and 2012, SMUD constructed a 128 MW wind project adjacent to Solano Phase 2, known as Solano 3. The Solano 3 project consists of 31 WTGs rated at 1.8 MW and 24 WTGs rated at 3.0 MW. The project interconnects through a 34.5 kV underground collection system to the Russell substation. Like the Solano Phase 2 project, this energy is transformed to 230 kV and delivered through the CAISO.

Solano 4 Project. SMUD has developed the Solano 4 Wind Project on land with a wind easement owned by SMUD near the Solano 3 project, known as the Collinsville and Roberts properties, to install 10 WTGs rated at 4.5 MW, and to remove the Solano 1 turbines and replace them with 9 WTGs rated at 4.5 MW. SMUD has met all of the CAISO requirements and has an executed a Large Generator Interconnection Agreement ("LGIA") as of June 2021 that will allow for 90.8 MW of capacity at the point of interconnection. In April 2021, SMUD submitted an application for advisory review by the Solano County Airport Land Use Commission (the "Solano ALUC") of the Solano 4 Wind Project's consistency

with the 2015 Travis Air Force Base Land Use Compatibility Plan (the “Travis Plan”). In May 2021, the Solano ALUC purported to resolve that the Solano 4 Wind Project was inconsistent with the Travis Plan. In August 2021, the Board approved the Project Environmental Impact Report, made findings overriding the Solano ALUC’s finding of inconsistency, made findings there was no alternative to the project, and approved the Solano 4 Wind Project. In September 2021, Solano County filed a writ petition challenging SMUD’s approval of the Solano 4 Wind Project based on procedural environmental, zoning and land use grounds. The parties entered into a settlement agreement on December 14, 2022, and the suit was dismissed on January 10, 2023. The settlement agreement allows for the construction of the Solano 4 Wind Project as planned.

In addition, SMUD applied for and obtained extensions of the Federal Aviation Administration Determinations of No Hazard allowing for construction of the turbines. A contract for the construction of the Solano 4 Wind Project was awarded to Vestas Corporation and the Solano 4 Wind Project is currently under construction. The expected operation date for the Solano 4 Wind Project is May 2024. PG&E identified upgrades needed to interconnect the Solano 4 Wind Project that will not be complete before the expected Solano 4 commercial operation date. PG&E has an approved project and expects to complete the needed upgrades by May of 2025. Realization of the full capacity of the Solano 4 Wind Project may be delayed into the second quarter of 2025 due to the timeframe established for the PG&E required transmission upgrades. SMUD has developed a mitigation plan for the limited interconnection capacity for the first year of operation, in coordination with CAISO and PG&E, of using all of the existing SMUD Solano Russell substation interconnection capacity combined for the dispatch of all the Solano Wind Project. SMUD completed a combined LGIA amendment administrative process, which combines all phases of the Solano Wind Project so it may operate as one project. This was fully executed by SMUD, CAISO, and PG&E on February 27, 2023.

As of the end of 2023, all of the turbine site delivery roads and foundations for the Solano 4 Project have been completed, all of the turbine components have been delivered to the Solano 4 Project site and 10 of the Solano 4 Project turbines have been fully erected.

At the completion of the Solano 4 project, SMUD will have an installed wind capacity of 303 MW in connection with the overall Solano Wind Project, leaving 18 MW at the point of interconnection for future development.

Distributed Solar Photovoltaic. SMUD owns and operates approximately 2 MW of solar photovoltaic generating facilities. These facilities include installations at the Hedge Substation property, SMUD Headquarters, the East Campus Operations Center, and other smaller photovoltaic systems throughout the service area on parking lots.

Hedge Battery. SMUD owns and operates a 4 MW, 8 MWh, battery energy storage system located near the Hedge Substation in South Sacramento. The facility reached commercial operation in January 2023.

ESS Flow Battery. SMUD owns and operates a 0.45 MW, 3 MWh, battery energy storage system located near the Hedge Substation in South Sacramento. The facility reached test operation in September 2023, and commercial operation is planned for March 2024.

Local Gas-Fired Plants. SMUD constructed five local natural gas-fired plants in its service area: the Carson Project, the Procter & Gamble Project, the Campbell Soup Project, McClellan and the Cosumnes Power Plant (each defined below). These five plants are referred to collectively as the “Local Gas-Fired Plants.” These plants are a strategic component of SMUD’s resource mix. In addition to providing SMUD a total capacity of approximately 1,139 MW, the Local Gas-Fired Plants provide SMUD with needed

voltage support, operational and load following capability, and the reliability inherent in having power resources located close to loads. With the exception of McClellan, these plants were financed through the issuance of project revenue bonds by separate joint powers authorities (collectively, the “Authorities”). In late 2021, ownership of all of the Local Gas-Fired Plants was transferred to one of the Authorities, SFA. SMUD has entered into long-term agreements with SFA providing for the purchase by SMUD of all of the power from each of the Local Gas-Fired Plants on a take-or-pay basis. This consolidation created operational and administrative efficiencies without changing any of the functionality of the power plants. Although the Local Gas-Fired Plants are owned by SFA, SMUD has exclusive control of their dispatch and manages their operations as part of its overall power supply strategy.

Payments under the power purchase agreements are payable from the revenues of SMUD’s Electric System prior to the payment of the principal of or interest on SMUD’s Senior Bonds and Subordinated Bonds (each as defined under the caption “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS” below), as are other maintenance and operation costs and energy payments. For further discussion of SMUD’s obligations to make these payments to SFA, see “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Joint Powers Authorities.*”

The following is a brief description of the five Local Gas-Fired Plants:

The Cosumnes Power Plant (the “Cosumnes Power Plant”). The Cosumnes Power Plant is a 612 MW natural gas-fired, combined cycle plant located in the southern portion of Sacramento County adjacent to SMUD’s decommissioned Rancho Seco Nuclear Power Plant. Commercial operation of the Cosumnes Power Plant commenced on February 24, 2006. SFA increased the net generating capacity of the facility by 81 MWs via an Advanced Gas Path (“AGP”) upgrade. The additional AGP generation was realized after hardware and software upgrades were completed on both units in March of 2019. The Cosumnes Power Plant is owned by SFA, a joint powers authority formed by SMUD and MID. The existing take-or-pay power purchase agreement between SMUD and SFA expires no earlier than when the related bonds have been paid in full (the outstanding related bonds are scheduled to mature on July 1, 2030). On June 5, 2022, the Cosumnes Power Plant was shut down due to a ground fault in the STG stator. The repair was completed in February 2023 and the plant returned to service on March 5, 2023. See “FACTORS AFFECTING THE REGION – Cosumnes Power Plant Outage”.

The Carson Cogeneration Project (the “Carson Project”). The Carson Project, a 103 MW natural-gas-fired cogeneration project consisting of separate combined cycle and peaking plants, provides steam to the Sacramento Regional County Sanitation District (“SRCSD”) wastewater treatment plant adjacent to the site. The Carson Project was originally owned by the Central Valley Financing Authority (“CVFA”), a joint powers authority formed by SMUD and the SRCSD. Construction of the Carson Project was completed and the plant began commercial operation on October 11, 1995. The CVFA bonds issued to finance the Carson Project were defeased in September 2019. In late 2021, ownership of the Carson Project was transferred to SFA. The take-or-pay power purchase agreement between SMUD and SFA relating to the Carson Project will be in effect until terminated by SMUD.

The Procter & Gamble Cogeneration Project (the “Procter & Gamble Project”). The Procter & Gamble Project, a 182 MW natural gas-fired cogeneration facility, is located in an established industrial area of Sacramento. The initial combined cycle portion of the plant began commercial operation on March 1, 1997. Construction of the peaking plant portion of the Procter & Gamble Project commenced during 2000 and the unit achieved commercial status on April 24, 2001. The Procter & Gamble Project produces steam for use in Procter & Gamble Manufacturing Company’s oleochemical manufacturing processes and electricity for sale to SMUD. The Procter & Gamble Project was originally owned by the Sacramento Cogeneration Authority (“SCA”), a joint powers authority formed by SMUD and SFA, a separate joint powers authority. The SCA bonds issued to finance the Procter & Gamble Project were defeased in

September 2019. In late 2021, ownership of the Procter & Gamble Project was transferred to SFA. The take-or-pay power purchase agreement between SMUD and SFA relating to the Procter & Gamble Project will be in effect until terminated by SMUD.

The Campbell Soup Cogeneration Project (the “Campbell Soup Project”). The Campbell Soup Project, a 170 MW natural gas-fired cogeneration project, was completed and began commercial operations on December 4, 1997. Upgrades were implemented during 2000, which increased the plant’s peaking capacity to 180 MW, well above its net demonstrated capacity of 159.8 MW. The plant is located in south Sacramento adjacent to the Capital Commerce Center (formerly the Campbell Soup Company food processing facility). The Campbell Soup Project was originally owned by the Sacramento Power Authority (“SPA”), a joint powers authority formed by SMUD and SFA. The SPA bonds issued to finance the Campbell Soup Project were redeemed in July 2015. In late 2021, ownership of the Campbell Soup Project was transferred to SFA. The take-or-pay power purchase agreement between SMUD and SFA relating to the Campbell Soup Project (the “Campbell Soup/McClellan PPA”) covers both the Campbell Soup Project and McClellan and will be in effect until terminated by SMUD. In support of the Zero Carbon Plan, SMUD is exploring replacing the Campbell Soup Project in 2026, contingent upon SMUD having sufficient other resources available and grid reliability can be maintained. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – 2030 Zero Carbon Plan.”

The McClellan Gas Turbine (“McClellan”). McClellan is a 72 MW natural gas-fired simple cycle combustion turbine generating plant at McClellan Business Park in Sacramento. This turbine is connected to SMUD’s electric system and is operated to meet SMUD’s peak-load requirements. McClellan is aligned for remote starting and operation with both black start and fast start capabilities. SMUD constructed the McClellan unit in 1986 as a 50 MW emergency power source for the McClellan Air Force Base. In 2001, following the Air Force Base closure, McClellan was upgraded to 72 MW and converted for SMUD’s use. In May 2007, SMUD transferred ownership of McClellan to SPA for more efficient operation. SPA did not issue debt related to McClellan. In late 2021, ownership of McClellan was transferred to SFA. SFA passes all costs of operations and maintenance through to SMUD in accordance with the terms of the Campbell Soup/McClellan PPA. In exchange for paying all costs related to McClellan, SMUD receives all of the power generated thereby on a take-or-pay basis. In support of the Zero Carbon Plan, SMUD is exploring replacing McClellan in 2026, contingent upon SMUD having sufficient other resources available and grid reliability can be maintained. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – 2030 Zero Carbon Plan.”

Fuel Supply

General. SMUD is obligated to arrange for the purchase and delivery of natural gas to the Local Gas-Fired Plants. Management of the natural gas procurement and delivery process is a key focus of SMUD’s reliability and risk policies. Although the natural gas consumption of the power plants for SMUD’s load can vary significantly depending on the season, precipitation, and the market price of power and natural gas, the plants are forecasted to need, on average in 2024, a total of approximately 91,000 Decatherms per day (“Dth/day”) with a daily peak slightly more than 171,000 Dth/day of natural gas. SMUD has implemented a comprehensive strategy to secure a reliable and diversified fuel supply through a variety of agreements for the supply, transportation, and storage of natural gas.

Supply. SMUD hedges a significant portion of its expected gas needs to meet customer power requirements. This includes gas for the Local Gas-Fired Plants and for the Sutter Energy Center. See “Power Purchase Agreements – *Sutter Energy Center*”. This is accomplished through a combination of long-term supply arrangements and an exposure reduction program. The program consists of a primary rolling three-year exposure reduction component, a fuel hedging component on a rolling three-year basis, as well as supplemental fixed calendar year components reaching out up to five calendar years. Long-term

arrangements may consist of a combination of physical commodity supply contracts, financial hedges, or options. Natural gas is purchased from a wide variety of producers and marketers at the northern and southern California borders, and from the San Juan and the Rocky Mountain supply basins. SMUD has a number of both fixed-price supply agreements and financial hedging contracts to fix gas costs ranging from one month to several years in duration. Including fixed price biogas contracts as of February 29, 2024, these contracts are forecasted to have hedged the price exposure on approximately 100%, 82% and 81% of SMUD's anticipated natural gas requirements for 2024, 2025 and 2026, respectively. While the financial effects resulting from the unhedged portions of SMUD's natural gas requirements are difficult to predict, SMUD's financial results could be materially impacted.

SMUD has contracted with NCGA to purchase an approximate average of 8,700 Dth/day over the remaining life of a contract expiring May 31, 2027 (the "NCGA Contract"). Under the NCGA contract, SMUD pays a discounted variable price for the fuel and anticipates periodically fixing the effective price under separate hedging contracts. Until November 1, 2023 the delivery point for the NCGA Contract was the AECO hub in Alberta. Starting November 1, 2023, to increase delivery efficiencies, SMUD has exchanged the gas delivered at the AECO hub under the NCGA Contract with gas delivered at the Malin substation at the California-Oregon border. From there SMUD is using its long-term transport capacity to deliver the fuel to the local area plants.

SMUD has also contracted with NCEA to purchase an approximately 22,000 Dth/day on average, or to be converted to the approximate cash flow value in Megawatt-hours ("MWh") of electricity over the remaining life of a contract expiring on May 31, 2049. The gas will be delivered to the SMUD system via the Malin receipt point on the PG&E backbone system. SMUD is using its long-term transport capacity to deliver the fuel to the local area plants. SMUD will pay a discounted variable price for the fuel and anticipates periodically fixing the effective price under separate hedging contracts. [As described in the forepart of this Official Statement, SMUD expects to amend and restate the contract with NCEA in connection with the issuance of the Bonds (as defined in the forepart of this Official Statement).] [adjust for 2024 Senior Bonds offering documents]

Renewable Natural Gas Supply. As a component of meeting SMUD's RPS goals, SMUD procures renewable natural gas and digester gas as fuels to generate renewable electricity from the Cosumnes Power Plant. Descriptions of the renewable natural gas supply agreements are provided below.

In March 2009, SMUD entered into a 15-year contract (that qualifies as renewable energy) with Shell Energy North America (US), L.P. ("Shell Energy") to purchase up to 6,000 Dth/day of renewable natural gas produced from a landfill project in Texas. SMUD began taking deliveries of this supply in April 2009. In March 2012, SMUD amended the contract with Shell Energy to increase the maximum volumes to 7,300 Dth/day and extended the term by 10 years to March 31, 2034. Currently, the delivery point is PG&E Topock and SMUD is using its long-term transport capacity to deliver it to the Cosumnes Power Plant. In 2016, SMUD entered into a 3-year contract with Shell Energy to sell back the entire volume of renewable natural gas purchased, less 500 Dth/day, to be sold into the vehicle transportation markets. Upon expiration of the initial 3-year contract for the sale of biogas to Shell Energy, SMUD extended the sell back of the entire volume of biogas twice for an additional three years with Element Markets (now Anew RNG, LLC), starting in 2020 and 2023. While SMUD sells the renewable natural gas, it does not count the renewable natural gas towards its RPS obligations.

SMUD contracted with Heartland Renewable Energy, LLC ("HRE") in December 2009 for a 20-year supply of up to 7,000 Dth/day of renewable natural gas from a digester facility in Colorado. Deliveries began in March of 2014. Currently, the delivery point is Opal, Wyoming and SMUD uses its long-term transport capacity to deliver it to the Cosumnes Power Plant. HRE has not delivered volumes from the project to SMUD since December 2016 due to litigation with Weld County, Colorado regarding odor and

permit issues. EDF Renewables, the majority owner of HRE, notified SMUD in August of 2017 that it is in discussions with a short list of bidders to sell its interests in the facility. In June of 2020, the project was purchased and SMUD's contract was assigned to the new owner, Platte River Biogas, LLC ("PRB"). SMUD and PRB reached a settlement in the third quarter of 2021 that could lead to terminating the contract.

In September 2011, SMUD and CVFA entered into a "Digester Gas Purchase and Sale Agreement" through which the Carson Project cleans nearly all of the digester gas received from Sacramento Regional County Sanitation District ("SRCSD") and sells it to SMUD for delivery to the Cosumnes Power Plant. In return, SMUD pays all of the Carson Project's costs in acquiring, cleaning and making the gas available to SMUD. The Digester Gas Purchase and Sale Agreement expires in September 2025. In late 2021, the Digester Gas Purchase and Sale Agreement, along with the Carson Project was transferred to SFA. The Carson Project is currently receiving, processing and selling up to 1,500 Dth/day with provisions for volume increases over time to 2,500 Dth/day. Digester gas, when designated for use in SMUD's power plants, is counted as renewable generation towards SMUD's RPS obligations.

In December 2011, SMUD entered into a 20-year agreement with EIF KC Landfill Gas LLC ("EIF") to purchase up to 7,050 Dth/day of renewable natural gas produced from multiple landfill projects. SMUD began taking deliveries of this supply in January 2014. Currently the delivery point is Kern River – Opal and SMUD uses its long-term transport capacity to deliver it to the Cosumnes Power Plant. Renewable natural gas, when designated for use in SMUD's power plants, is counted as renewable generation towards SMUD's RPS obligations. In April 2022, SMUD entered into a transaction to sell the renewable natural gas purchased into the vehicle transportation markets. The transaction expires in March 2025. While SMUD sells the renewable natural gas, it does not count the renewable natural gas towards its RPS obligations.

AB 2196 is a law that defines the criteria by which existing and future renewable natural gas contracts will qualify for the State RPS program. The CEC adopted a RPS Eligibility Guidebook on April 30, 2013, which includes detailed rules for implementation of AB 2196. SMUD received an updated certificate of eligibility from the CEC in July 2014 for the Cosumnes Power Plant that included the quantities of renewable natural gas from all four contracts. The CEC adopted a revised RPS Eligibility Guidebook (Ninth Edition) on April 27, 2017. This latest guidebook did not change the RPS eligibility of any of the above SMUD renewable natural gas and digester gas contracts, but did simplify reporting requirements for these contracts.

Gas Transmission

SMUD has satisfied its obligation to deliver natural gas to its power plants by constructing a natural gas pipeline, purchasing an equity interest in two PG&E backbone gas transmission lines, and contracting for capacity on a number of existing interstate natural gas transmission lines.

The Local Pipeline. SMUD constructed and owns a 20-inch, 50-mile natural gas pipeline in the greater Sacramento area (the "Local Pipeline") that transports gas to all of the Local Gas-Fired Plants except McClellan. The Local Pipeline is interconnected with PG&E's major State gas transmission lines 300 and 401. Additionally, it may be interconnected with one or more private gas gathering pipelines located in the area, a gas storage project and/or other FERC approved pipelines that may be built in the local area. In conjunction with the construction of the Cosumnes Power Plant, SMUD extended the Local Pipeline to the plant site. The 26-mile extension was completed in 2004. The extension is 24 inches in diameter and was designed to serve both the Cosumnes Power Plant and an additional second phase, if constructed.

PG&E Backbone Gas Transmission Lines 300 and 401. In 1996, SMUD purchased an equity interest in PG&E's backbone gas transmission lines 300 and 401 (referred to as the PG&E backbone). The total capacity acquired at that time was approximately 85,000 Dth/day and consisted of approximately 43,600 Dth/day of firm gas transport from the California–Oregon border at Malin, Oregon and 44,700 Dth/day from the California–Arizona border at Topock, Arizona, to SMUD's interconnection with the PG&E backbone near Winters, California. SMUD was also entitled to a share of non-firm capacity, which was approximately 4,360 Dth/day; making the total capacity potentially available to SMUD almost 90,000 Dth/day. This purchase made SMUD a co-owner of the PG&E backbone gas transmission lines 300 and 401 and obligated SMUD to pay PG&E to operate the pipelines on its behalf subject to the terms of the purchase agreement and operating protocols. PG&E reduced operating pressures on Line 300 after PG&E suffered a natural gas explosion in San Bruno, CA in September of 2010. Operating pressures and capacity may also fluctuate due to regulatory and other changes. As of December 1, 2021, SMUD holds a total capacity of approximately 87,000 Dth/day, consisting of approximately 47,572 Dth/day of firm gas transport from the California–Oregon border at Malin, and 39,193 Dth/day of firm gas transport from the California–Arizona border at Topock, Arizona, to SMUD's interconnection with the PG&E backbone near Winters, California.

Kern River Gas Transmission Company Long Term Agreement. SMUD has an agreement with Kern River Gas Transmission Company for 20,000 Dth/day of firm capacity through April 30, 2028. This capacity gives SMUD access to the Rocky Mountain supply basin at Opal, Wyoming, and connects to PG&E Line 300 (owned in part by SMUD) at Daggett, California.

SMUD's diversified portfolio of gas transmission arrangements allow for the purchase of gas from a variety of suppliers and locations, and the opportunity to capitalize on regional price differentials where possible. In addition, its ownership interest in the SMUD/PG&E backbone and Local Pipeline enhances the reliability of SMUD's gas supply.

Gas Storage

SMUD also employs gas storage as part of its overall fuel supply strategy. Gas storage is useful in helping to balance gas supply, mitigate market price volatility, and provide a reliable supply to meet peak day delivery requirements.

SMUD has a contract with Lodi Gas Storage, LLC, which began in April 2023 and expires in March 2026, for capacity in the Lodi Gas Storage project located near Acampo in northern California. The contract provides SMUD with capacity levels of 1.0 million Dth of storage inventory, 10,000 Dth/day of injection rights and 20,000 Dth/day of withdrawal capacity.

SMUD also has a second contract with Lodi Gas Storage, LLC, which began in April 2022 and expires in March 2024, for additional capacity in the Lodi Gas Storage project located near Acampo in northern California. The contract provides SMUD with capacity levels of 1.0 million Dth of storage inventory, 10,000 Dth/day of injection rights and 20,000 Dth/day of withdrawal capacity. SMUD does not plan to renew this contract upon expiration.

SMUD has a contract with Wild Goose Storage LLC, that will begin in April 2024 (but which allows for early injection (December 2023 – March 2024)) for capacity in the Wild Goose Storage project located near Gridley in northern California. The contract provides SMUD with capacity levels of 2.0 million Dth of storage inventory, ratcheted (12,500-14,000 Dth/day) volumes of injection rights and ratcheted (10,000 – 24,000 Dth/day) volumes of withdrawal capacity.

Power Purchase Agreements

SMUD has a number of power purchase agreements to help meet its power requirements. Some of these agreements are described below.

Western Area Power Administration. Effective January 1, 2005, SMUD entered into a 20-year contract with WAPA. SMUD has entered into a replacement agreement extending the term by 30 years for the period of January 1, 2025 through December 31, 2054. Power sold under this contract is generated by the Central Valley Project (“CVP”), a series of federal hydroelectric facilities in northern California operated by the United States Bureau of Reclamation. The contract provides WAPA’s CVP Base Resource customers (including SMUD) delivery of a percentage share of project generation in return for reimbursement of an equivalent share of project costs. SMUD’s CVP Base Resource share is roughly 25% of project generation and costs. This is expected to be approximately 318 MW of capacity and 661 GWh of energy in an average water year but will vary depending on precipitation. Energy available under the contract is determined by water releases required for water supply and flood control and is then shaped into higher value periods within other CVP operating constraints. More capacity and energy are typically available in spring and summer months and less in fall and winter.

SMUD also has a contract with WAPA expiring December 31, 2024, by which WAPA delivers an additional 200-300 MW per hour from projects located in the Pacific Northwest based on certain contractual parameters. In 2022, SMUD received 1,913 GWh of energy under this contract. SMUD has entered into a replacement agreement for the period January 1, 2025 through December 31, 2030.

Avangrid (formerly Iberdrola Renewables (“Iberdrola”)). SMUD has a contract with Iberdrola that provides SMUD with bundled renewable energy (energy plus RECs). The contract agreement is for 126 GWh of wind power generated in Solano County, California. The SMUD Board approved an extension of the wind contract through June 30, 2025.

Patua Project LLC. In April 2010, SMUD entered into a power purchase agreement with Patua Project LLC (“Patua”), a subsidiary of Gradient Resources, for the delivery of up to 132 MW (expected to be 120 MW nominal power output) of renewable energy from geothermal generation being developed in north central Nevada, from a Gradient Resources project known as the Patua Project. The Patua Project was to have been developed in three phases. Since 2010, the agreed upon capacity has been reduced several times. In December 2013, Phase 1 of the project, which had been reduced to 30 MW, finally achieved commercial operation. In 2014, the parties concluded negotiations on the fourth amendment to the power purchase agreement with Patua, which reduced the total capacity down to 40 MW, extended the commercial operation date of Phase 2 to January 1, 2016, and allowed Patua to add up to 13 MW of solar photovoltaics to supplement geothermal production. In addition, this amendment shifted responsibility to Patua for a portion of the long-term transmission service agreements that have been underutilized due to the project not meeting its targets. In November 2015, the Patua Project was acquired by TL Power, LLC, a wholly owned subsidiary of Cyrq Energy, Inc. (“Cyrq”). In December 2015, Cyrq terminated Phase 2. Upon termination of Phase 2, the contractual right for Cyrq to add solar photovoltaics to supplement geothermal production was reduced to 10 MW. As a result of poor performance during the first year of operation, SMUD reduced its obligation to take power from 30 MW to 25 MW. Performance continued to lag in 2015 and 2016 and SMUD further reduced its obligation to take power from 25 MW to 19 MW.

Renewable Energy Feed-In Tariff. In September 2009, SMUD’s Board authorized a feed-in tariff program for the purchase of renewable energy from local renewable energy projects connected to SMUD’s distribution system. SMUD’s Board authorized connection of up to 100 MW under the feed-in tariff which included standard payment rates and standard purchase terms for power. The feed-in tariff program became effective on January 1, 2010. Under the feed-in tariff, SMUD has executed 20-year term power purchase

agreements for solar projects totaling 98.5 MW. Construction and start-up were completed on all projects between 2010 and 2012.

CalEnergy LLC. In August 2014, SMUD entered into a 22-year power purchase agreement with CalEnergy LLC for the purchase of 30 MW per year of renewable energy from its Salton Sea geothermal facilities. As of July 1, 2017, SMUD began receiving up to 10 MW from the CalEnergy portfolio, which escalated to the full 30 MWs on May 1, 2020.

Rancho Seco Solar. In October 2015, SMUD entered into a 20-year power purchase agreement with Rancho Seco Solar LLC for the purchase of energy from a 10.88 MW solar PV project sited on SMUD's property at the closed Rancho Seco Nuclear Generating Station. Commercial operation was achieved in August of 2016. Rancho Seco Solar LLC leased the property from SMUD under a land lease agreement. The output of this project directly serves two large commercial customers that executed agreements with SMUD for retail supply of solar power.

In May 2019, SMUD entered into a 30-year power purchase agreement for an additional 160 MW solar PV project with Rancho Seco Solar II, LLC. The project is located on SMUD-owned property at the closed Rancho Seco Nuclear Generating Station, adjacent to the existing 10.88 MW solar PV project. Construction began in 2019, and the project became commercially operable in February 2021.

Grady Wind Energy. In October 2015, SMUD entered into a 25-year power purchase agreement with Grady Wind Energy LLC ("Grady") for the purchase of energy from a 200 MW wind project located in New Mexico (the "Grady Project"). The Grady Project began commercial operations on August 5, 2019. Energy from the Grady Project is delivered to CAISO. SMUD purchases 100% of the Grady Project output which includes energy, renewable energy credits, and capacity attributes.

Great Valley Solar 2, LLC. In January 2017, SMUD entered into a 20-year power purchase agreement with Great Valley Solar 2, LLC for the purchase of energy from a 60 MW solar PV project located in Fresno County, California. The project's commercial operation date was December 28, 2017.

ARP-Loyalton Cogen LLC. On September 14, 2016, Senate Bill 859 ("SB 859") was signed into law. Under SB 859, a POU must procure its proportionate share of 125 MW of renewable energy from biomass plants burning high hazard forest fuels, subject to terms of at least five years. Seven POUs (SMUD, MID, Turlock Irrigation District ("TID"), Anaheim Public Utilities, Imperial Irrigation District, Los Angeles Department of Water & Power and Riverside Public Utilities, collectively described herein as the "ARP-Loyalton POUs") jointly solicited proposals for up to 29 MW of contract capacity for renewable energy to meet the requirements of SB 859. In January 2018, SMUD entered into a five-year power purchase agreement with ARP-Loyalton Cogen LLC to fulfill 18 MW of the required 29 MW with SMUD's share being just over 23 percent (the "ARP-Loyalton PPA"). See "*Roseburg Forest Product Co.*" below for a discussion of the remaining SB 859 capacity. The contract became effective on April 1, 2018. On February 18, 2020, ARP-Loyalton Cogen LLC filed for Chapter 11 bankruptcy and stopped producing and selling energy from the biomass plant. On May 7, 2020, the bankruptcy court approved the sale of the Loyalton facility to Sierra Valley Enterprises, LLC ("SVE"). SVE initially expressed interest in bringing the facility back into service; however, the bankruptcy trustee requested repeated extension of the deadline for SVE to accept or reject the ARP-Loyalton PPA. The latest deadline was April 19, 2023, the date of expiration of the ARP-Loyalton PPA term. As SVE did not resume operations before the end of the ARP-Loyalton PPA term, the ARP-Loyalton POUs have negotiated a settlement agreement with the bankruptcy trustee (the "ARP-Loyalton Settlement Agreement"). The ARP-Loyalton Settlement Agreement, which SMUD executed and is filed with the court, defines funds from the performance security that the ARP-Loyalton POUs will keep to cover legal and administrative fees, along with a contingency amount to cover potential risk of future damages. Since the ARP-Loyalton POUs entered into a five-year agreement to

procure compliant biomass and provided SVE the opportunity to accept the ARP-Loyalton PPA and restart operations, the ARP-Loyalton POUs consider their statutory obligations to have been fulfilled.

Roseburg Forest Products Co. For the remaining SB 859 biomass obligation of 11 MW, SMUD and the other ARP-Loyalton POUs have entered into a five-year power purchase agreement with Roseburg Forest Products Co. SMUD's share of the contract capacity is 2.5795 MW, and the plant began operating under the contract on February 26, 2021.

Sutter Energy Center. SMUD entered into an initial two-year contract (with a third-year exercisable option) with Calpine Energy Services, L.P. ("Calpine") for the ability to schedule up to 258 MW of energy from Sutter Energy Center. The Sutter Energy Center is a natural gas-fired, combined-cycle facility located in Yuba City, California. The initial contract became effective on April 1, 2018. SMUD exercised its option to extend the contract, which expired November 1, 2020. SMUD entered into a new contract with Calpine for the same 258 MW of energy that became effective January 1, 2021, and had an original expiration date of January 1, 2024. In December 2021, SMUD extended this contract through December 31, 2026.

Drew Solar, LLC. In June 2018, SMUD entered into a 30-year power purchase agreement with Drew Solar, LLC for the purchase of energy from a 100 MW solar PV project located in Imperial County, California. The project's scheduled commercial operation date was set to be December 31, 2021. The commercial operation date was delayed due to Force Majeure claims surrounding the COVID pandemic and supply chain constraints caused by changes in Federal regulatory requirements. The project began commercially operating on November 3, 2022.

Wildflower Solar. In October 2018, SMUD entered into a 25-year power purchase agreement with Wildflower Solar I, LLC, for the purchase of energy, capacity, and RECs from a 13 MW solar PV project located in Rio Linda, California. The project began commercially operating on December 18, 2020.

Coyote Creek (Formerly Sacramento Valley Energy Center, LLC.) In August 2021, SMUD entered into a 30-year power purchase agreement with Sacramento Valley Energy Center, LLC for the purchase of energy from a 200 MW solar PV and 100 MW four-hour Battery Energy Storage System ("BESS") capacity project located in Sacramento County, California. The project's commercial operation date was originally expected to be December 31, 2023, but has been delayed to 2026 due to ongoing development and permitting delays.

SloughHouse Solar, LLC. In September 2021, SMUD entered into a 30-year power purchase agreement with SloughHouse Solar, LLC for the purchase of energy from a 50 MW solar PV project located in Sacramento County, California. The project's commercial operation date was originally expected to be December 31, 2023, but the commercial operation date has been delayed to March 31, 2025 due to ongoing development and permitting delays.

Country Acres Solar. In November 2023, SMUD entered into a 30-year power purchase agreement with Country Acres Clean Power LLC for the purchase of energy from a 344 MW solar PV project, with a 20-year term for 172 MW four-hour BESS capacity, located in Placer County, California. The project's commercial operation date is expected to be December 15, 2026.

Geysers Power Company, LLC. In March 2021, SMUD executed a 10-year power purchase agreement with Geysers Power Company, LLC for 100 MW of energy and capacity from the Geysers geothermal energy plant located in Lake and Sonoma Counties, California. SMUD started to receive deliveries on January 1, 2023.

Transmission Service Agreements

TANC California-Oregon Transmission Project. The 340-mile COTP is one part of a three 500-kV line coordinated system known as the California-Oregon Intertie (“COI”). The COTP is allocated one-third of the 4,800 MW capability of the COI system (see related agreements below). TANC is entitled to use 1,390 MW and is obligated to pay approximately 80% of the operating costs of the COTP. SMUD is a member of TANC and a party to Project Agreement No. 3 (“PA3”), under which it is entitled to 378 MW and obligated to pay on an unconditional take-or-pay basis about 27.5% of TANC’s COTP debt service and operations costs, subject to a “step-up” obligation of up to 25% of its entitlement share upon the unremedied default of another TANC member-participant. In 2009, SMUD entered into a long-term layoff agreement with certain members that increased SMUD’s entitlement by 35 MW. In 2014, SMUD entered into another long-term layoff agreement with certain other members that increased SMUD’s COTP entitlements by 128 MW and amended the 2009 layoff agreement that returned 13 MW to a member. In January 2024, SMUD entered into an agreement to extend the 2009 long-term layoff agreement with certain members to January 31, 2034. As of January 31, 2024, SMUD was entitled to approximately 528 MW of TANC’s transfer capability for imports and 405 MW for exports, and is obligated to pay approximately 38.6% of TANC’s COTP debt service and operations costs. SMUD’s payments under this contract, like SMUD’s payments under its other power purchase and transmission service agreements, are treated as “Maintenance and Operation Costs” or “Energy Payments” under the resolutions securing the Senior Bonds and Subordinated Bonds (each as defined under the caption “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS” below). SMUD relies on its COTP rights to purchase power, access contingency reserves through the Western Power Pool, and obtain renewable resources to supplement its own resources to serve its load. TANC maintains its own property/casualty insurance program. TANC’s budget for COTP costs, support services and advocacy expenses is about \$45.4 million for 2023. SMUD’s obligation of the TANC budget is about \$17.4 million for 2023.

TANC Tesla-Midway Transmission Service. TANC has a long-term contract with PG&E to provide TANC with 300 MW of transmission service between PG&E’s Midway Substation and the electric systems of the TANC Members (the “Tesla-Midway Service”). SMUD’s share of the Tesla-Midway Service had been 46 MW. As part of the 2009 long-term layoff agreement, SMUD acquired an additional 2 MW of South-of Tesla Principles (“SOTP”) transmission rights for 15 years starting February, 2009 from another TANC member, bringing SMUD’s share of the Tesla-Midway Service to 48 MW.

Bonneville Power Administration. In 2009, SMUD entered into a transmission service agreement with the Bonneville Power Administration (“BPA”) for 60 MW of firm point-to-point transmission service from BPA’s Hilltop substation in northeastern California to the Malin substation at the California-Oregon border for the purpose of transmitting power under SMUD’s power purchase agreement with Gradient Resources for Phase 1 of the Patua geothermal project over BPA’s 230kV transmission lines. In early 2013, in accordance with BPA’s transmission tariff, the transmission service was split into two 30 MW services and deferred as appropriate to better fit the timing of expected commercial operation of Phase 1 and Phase 2 of the Patua Project. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – Patua Project LLC.” SMUD submitted another request for the 30 MW of transmission procured for Phase 2 of the Patua Project to split the service into a 10 MW and a 20 MW service, with the 10 MW of service deferred and timed with the originally expected commercial operation date of Phase 2 of the Patua Project. With the termination of Phase 2 of the Patua Project and SMUD’s reduced obligation due to the poor performance of Phase 1 of the Patua Project, much of the transmission reserved for it will no longer be needed. BPA does not have a provision in its transmission tariff for early termination of transmission service. However, the power purchase agreement with Patua requires Patua to cover unused transmission that SMUD has procured for the Patua purchases. On January 1, 2020, SMUD’s transmission rights with BPA were reduced to 19 MW. This now aligns with SMUD’s PacifiCorp transmission rights of 19 MW described in the immediately following paragraph.

Pacificorp. In 2009, SMUD entered into a transmission service agreement with PacifiCorp for 60 MW of firm point-to-point transmission service across PacifiCorp’s high voltage step-up transformer at the Malin substation at the California-Oregon border for the purpose of transmitting power under SMUD’s power purchase agreement with Gradient Resources for Phase 1 of the Patua Project. In early 2013, in accordance with PacifiCorp’s transmission tariff, the commencement of the 60 MW of transmission service was deferred to fit the timing of first deliveries expected from the 30 MW of Phase 1 of the Patua Project. In 2013, SMUD terminated the 60 MW of transmission service and requested two new transmission services of 30 MW each, with service start dates timed to better fit with the expected start dates of Phase 1 and Phase 2 of the Patua Project. With the reduction in expected output of the Patua Project, SMUD terminated the second 30 MW transmission agreement, and replaced it with a 10 MW transmission service agreement for Phase 2 of the Patua Project. With the termination of Phase 2 of the Patua Project, SMUD terminated the 10 MW Pacificorp transmission service agreement and as a result of the reduced obligation to take power from the Patua Project, SMUD has reduced its remaining Pacificorp transmission service from 30 MW to 19 MW.

Western Area Power Administration. SMUD does not have a direct interconnection of its power system to the COTP. To receive power deliveries that use its COTP rights, SMUD has a long-term transmission service agreement with WAPA for transmission of 342 MW of power from the COTP line (received at WAPA’s Tracy or Olinda substations) to SMUD’s system. In May of 2011, WAPA completed the Sacramento Voltage Support Transmission Project. Completion of this project has given SMUD an additional 165 MW of transmission service rights on WAPA’s system from the COTP at the Olinda Substation to SMUD’s system at the Elverta Substation.

Projected Resources

The following tables titled “Projected Requirements and Resources to Meet Load Requirements Energy Requirements and Resources” (the “Energy Table”) and “Capacity Requirements and Resources Net Capacity – Megawatts” (the “Capacity Table”) describe SMUD’s contracted commitments and owned resources available to meet its forecasted load requirements through the year 2033. Resources are shown on an annualized basis with market purchases netted against surplus sales to arrive at a single net position for each year. Because SMUD’s available resources do not exactly match its actual load requirements on an hourly basis, there are times during a year when resources available will either exceed or be insufficient to meet SMUD’s needs. Expected actual capacity values are included in the tables. These values may differ from measured net demonstrated capacity values of the Local Area Gas-Fired Plants. The table below also includes the impact energy efficiency has on resource requirements as discussed below under “Demand Side Management Programs.” See “BUSINESS STRATEGY” and “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Local Gas-Fired Plants.*”

Resources listed in both the Energy Table and the Capacity Table are listed as either renewable or non-renewable. Generally, SMUD follows the CEC guidelines for eligibility requirements. Some of SMUD’s renewable resources listed include solar, wind, geothermal, small hydroelectric facilities with a capacity of 30 MW or less, and biomass (representing generation from a fuel comprised of agricultural wastes and residues, landscape and tree trimmings, wood and wood waste).

As in any forecast, assumptions are made. In both the Energy Table and the Capacity Table the WAPA and UARP forecasts assume average water conditions throughout the period. On the capacity table, WAPA and Cosumnes Power Plant renewable capacity is estimated based on the ratio of renewable energy to total WAPA or Cosumnes Power Plant energy. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Hydroelectric.*”

The Uncommitted Purchases (Sales) on the tables represent either anticipated future needs or surpluses. Future needs are met well in advance of delivery. They also include both renewable and non-renewable resources.

The Transmission Losses represent reductions in the amount of energy or capacity from the location it was purchased to the point of entering SMUD's electrical system. This amount reduces the Total Resources available to meet the Total Projected Energy Requirements of the electrical system.

Demand Side Management Programs

SMUD's demand-side management initiatives represent an integral element of its total resource portfolio, and are organized into two major components: energy efficiency and load management programs. Energy efficiency offerings include a wide variety of programs and services to customers to retrofit or upgrade existing equipment and fixtures and to install new energy efficiency measures in existing and new construction facilities. Load management allows SMUD to reduce the load on the electric system by cycling residential air conditioning, and calling upon commercial/industrial customers to curtail energy usage when energy is constrained during the summer or system emergencies. Load management programs are projected to allow SMUD to shed approximately 60 MW of peak load in an emergency on a hot day, representing about 2% of SMUD's maximum system peak demand.

The customer "smart meter" system with 2-way communication capability provides information regarding customer usage patterns, which is expected to help SMUD tailor rate designs that provide customers with both the information and ability to manage their energy usage around high energy cost periods.

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**PROJECTED REQUIREMENTS AND RESOURCES TO MEET
LOAD REQUIREMENTS⁽¹⁾
ENERGY REQUIREMENTS AND RESOURCES (GWh)**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Renewable Resources										
<u>District or Joint Powers Authority Owned:</u>										
UARP - Small Hydro ⁽²⁾	95	92	94	94	94	94	94	94	94	94
Solano Wind	776	898	902	836	837	836	836	836	837	836
Cosumnes-Shell Landfill Gas and Digester Gas ⁽³⁾	61	505	582	692	692	692	692	692	692	692
Total	932	1,495	1,578	1,622	1,623	1,622	1,622	1,622	1,623	1,622
<u>Purchases</u>										
Western (WAPA) – Small Hydro ⁽²⁾	27	15	15	15	15	15	15	15	15	15
Grady – Wind	900	897	897	897	900	897	897	897	900	897
Avangrid (Iberdrola) (PPM) - Wind	73	34	0	0	0	0	0	0	0	0
Patua (Gradient/Vulcan) – Geothermal	113	146	147	147	147	147	147	141	147	147
Geysers – Geothermal	878	876	876	876	878	876	876	876	878	0
Cal Energy – Geothermal	224	223	223	223	224	223	223	223	224	223
Great Valley SolarShares	170	171	169	169	169	169	166	166	167	163
Rancho Seco PV2	332	330	328	327	325	323	322	320	319	317
Rancho Seco PV	22	22	22	22	22	22	22	22	22	22
Feed-in-Tariff Photovoltaic – Solar	209	208	207	206	205	204	203	202	60	0
Navajo Drew (NTUA) Solar	301	298	291	289	288	286	285	284	282	281
Sloughhouse (Kings Country)	0	22	125	124	124	123	122	122	121	121
Wildflower Solar	31	31	33	33	33	33	33	33	33	33
CoyoteCreek (SVEC) Solar	0	0	507	505	502	500	497	495	492	490
Country Acres	0	0	710	706	703	699	696	692	689	689
Other Long-Term Contracts	149	139	29	8	8	6	6	6	6	4
Future Uncommitted Renewables	0	0	0	600	1,989	3,351	4,206	4,537	5,870	5,870
Total	3,430	3,411	4,580	5,147	6,534	7,875	8,717	9,030	10,225	9,271
Non-Renewable										
<u>District or Joint Powers Authority Owned:</u>										
UARP – Large Hydro ⁽²⁾	1,536	1,578	1,610	1,618	1,625	1,635	1,625	1,617	1,626	1,635
Cosumnes Power Plant	4,219	3,756	3,685	2,511	1,792	675	675	530	528	525
Procter & Gamble Project	855	794	235	123	43	2	3	5	4	4
Carson Project	391	450	7	3	0	1	3	4	4	2
Campbell Soup Project	1,018	838	0	0	0	0	0	0	0	0
McClellan	36	0	0	0	0	0	0	0	0	0
Total	8,055	7,415	5,538	4,256	3,460	2,313	2,306	2,157	2,163	2,166
<u>Purchases</u>										
Western (WAPA) – Large Hydro ⁽²⁾	785	485	485	485	485	485	485	485	485	485
Western (WAPA) Customers (Wheeling) ⁽²⁾	46	29	29	29	29	29	29	29	29	29
Calpine Sutter	1,556	1,713	1,585	0	0	0	0	0	0	0
Committed Purchases	444	0	0	0	0	0	0	0	0	0
Total	2,831	2,227	2,099	514	514	514	514	514	514	514
Total Resources	15,247	14,548	13,795	11,538	12,131	12,324	13,159	13,323	14,526	13,573
Uncommitted Purchases / (Sales)	(4,420)	(3,613)	(2,775)	(399)	(780)	(906)	(1,672)	(1,780)	(2,866)	(1,867)
Transmission Losses (COTP/CVP)	(3)	(4)	(48)	(82)	(102)	(129)	(146)	(152)	(179)	(179)
Total Projected Energy Requirements	10,825	10,932	10,973	11,058	11,250	11,289	11,340	11,391	11,481	11,527
Energy Efficiency (EE)	26	50	74	98	122	141	160	180	197	224
Customer PV	67	98	133	164	196	228	259	288	317	344
Expected Electric Vehicle (EV) Charging	(88)	(167)	(265)	(382)	(514)	(661)	(821)	(980)	(1,157)	(1,357)
Electric Building (EB)	(13)	(32)	(54)	(80)	(113)	(156)	(209)	(272)	(343)	(417)
Battery Storage (Utility)	(0)	(1)	(118)	(121)	(142)	(188)	(225)	(232)	(266)	(266)
Battery Storage (BTM)	(0)	(1)	(1)	(2)	(3)	(5)	(6)	(8)	(10)	(11)
Total Gross Energy Requirements before EE, PV and EV Charging	10,816	10,880	10,741	10,734	10,795	10,648	10,498	10,367	10,219	10,044

(1) Totals may not sum due to rounding. Excludes a potential carbon sequestration power purchase agreement that SMUD is considering.

(2) 2024 based on current precipitation levels as of December 31, 2023. All other years assume average precipitation.

(3) Includes a biomethane contract counted as renewable (see “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Renewable Natural Gas Supply*”).

CAPACITY REQUIREMENTS AND RESOURCES⁽¹⁾
NET CAPACITY – MEGAWATTS

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Load:										
Planned Peak	2,981	2,991	2,990	3,017	3,024	3,029	3,032	3,056	3,088	3,104
Transmission Losses	28	28	28	28	28	28	28	28	28	28
Dispatchable Demand Resource	(71)	(71)	(165)	(165)	(183)	(202)	(165)	(165)	(165)	(165)
Adjusted Peak	2,938	2,949	2,853	2,880	2,869	2,855	2,895	2,919	2,951	2,967
Reserve Margin	514	516	499	504	502	500	507	511	516	519
Adjusted Peak with Reserves	3,452	3,465	3,352	3,384	3,371	3,355	3,402	3,430	3,467	3,486
Renewable Resources										
District or Joint Powers Authority Owned:										
UARP – Small Hydro	45	45	45	45	45	45	45	45	45	45
Solano Wind	70	129	128	139	133	134	113	108	115	109
Cosumnes – Shell Landfill Gas and Digester Gas ⁽²⁾	8	68	120	120	120	120	120	120	120	120
Total	123	242	293	304	298	299	278	273	279	273
Purchases										
Western (WAPA) – Small Hydro	11	9	9	9	9	9	9	9	9	9
Grady – Wind	25	20	75	68	58	74	72	72	66	67
Avangrid (Iberdrola) (PPM) - Wind	21	--	--	--	--	--	--	--	--	--
Patua (Gradient/Vulcan) – Geothermal	12	12	12	12	12	12	12	12	12	12
CalEnergy– Geothermal	26	26	26	26	26	26	26	26	26	26
Geysers – Geothermal	100	100	100	100	100	100	100	100	100	100
Great Value Solar Shares	35	33	12	11	13	11	9	6	7	5
Rancho Seco – PV1	2	2	1	1	1	0	0	0	0	0
Rancho Seco – PV2	66	61	22	19	17	14	14	10	10	8
Feed-in-Tariff Photovoltaic - Solar	37	31	10	8	7	6	6	4	4	--
Wildflower Solar	4	4	1	1	1	1	1	1	1	0
Navajo Solar	50	46	16	12	12	9	8	5	6	4
Sloughhouse Solar	--	--	18	15	14	13	13	10	10	8
CoyoteCreek Solar with Storage	--	--	159	149	142	142	132	130	127	122
CountryAcre with Storage	--	--	257	245	236	232	222	220	216	211
Stand-alone Storage	4	5	80	601	601	717	757	844	983	1,088
Future Uncommitted Renewables (Solar, Wind, Other)	--	--	--	51	146	148	184	189	184	193
Future Uncommitted Firm Renewables (Geothermal)	--	--	--	--	150	150	200	200	200	200
Other Long-Term Contracts	17	16	2	2	2	2	2	2	2	1
Total	410	364	797	1,330	1,545	1,655	1,767	1,841	1,960	1,954
Non-Renewable										
District or Joint Powers Authority Owned:										
UARP – Large Hydro	656	656	656	656	656	656	656	656	656	656
Cosumnes Power Plant	568	508	492	492	492	492	492	492	492	492
Carson Project	103	103	103	103	100	100	100	100	100	100
Procter & Gamble Project	166	166	166	166	166	--	--	150	150	150
McClellan	72	72	72	--	--	--	--	--	--	--
Campbell Soup Project	170	170	170	--	--	--	--	--	--	--
Total	1,735	1,675	1,659	1,417	1,414	1,248	1,248	1,398	1,398	1,398
Purchases										
Western (WAPA) – Large Hydro	363	304	304	304	304	304	304	304	304	304
Western (WAPA) Customers (wheeling)	21	18	18	18	18	18	18	18	18	18
Sutter Energy Center	258	258	258	--	--	--	--	--	--	--
Firm Contract Reserves ⁽³⁾	20	17	17	17	17	17	17	17	17	17
Committed Purchases	375	--	--	--	--	--	--	--	--	--
Total	1,037	596	596	338	338	338	338	338	338	338
Total Variable Renewal Diversity Benefit/(Risk)	120	91	178	219	262	318	353	452	481	482
Uncommitted Purchases / (Sales)	34	503	(165)	(478)	(482)	(508)	(577)	(867)	(984)	(960)
Total Resources	3,458	3,470	3,357	3,131	3,376	3,360	3,407	3,435	3,472	3,486

- (1) Based on information available as of December 31, 2023. Totals may not sum due to rounding. Capacity values for wind, solar, storage, and future variable renewable projects shown are based on resource ELCC modeling. Excludes a potential carbon sequestration power purchase agreement that SMUD is considering.
- (2) The Cosumnes Power Plant is a 612 MW plant that includes capacity attributable to a biogas contract counted as renewable (see “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Renewable Natural Gas Supply*”).
- (3) SMUD assumes that for all firm system purchases, the suppliers will be planning 5% reserves.

Balancing Authority Area Agreements

Background. SMUD began operating as an independent control area, later termed a Balancing Authority, on June 18, 2002 within the WECC reliability organization's region. This reduced SMUD's exposure to the costs and reliability risks of the CAISO's markets. SMUD expanded its operational footprint beyond SMUD's service territory to include WAPA's electric system, including the MID, Roseville, and Redding service areas (on January 1, 2005) and the COTP (on December 1, 2005). As described further below, SMUD ceased to be the Balancing Authority on April 30, 2011, as BANC took SMUD's place as the Balancing Authority. SMUD remains the operator of the Balancing Authority through a contract with BANC. SMUD administers the contracts with WAPA and TANC to provide specified Balancing Authority-related and other services, and is compensated by WAPA and TANC. TANC recovers such Balancing Authority services costs as a part of its annual operating budget from the COTP Participants and WAPA recovers its Balancing Authority services costs through its rates for power and transmission service. The agreement with WAPA, among other terms, establishes operating procedures and reserve obligations between the parties and terminates on December 31, 2024. BANC, SMUD and WAPA will develop successor agreements in 2024 to take effect upon expiration of the existing contract. WAPA in turn has agreements with electric systems connected to it to assure that such systems also operate reliably (i.e., MID, Roseville and Redding). As a result of the transition to BANC as the Balancing Authority, SMUD assigned or terminated its interconnection and operations agreements with other interconnecting Balancing Authority areas (i.e., CAISO, BPA and TID). BANC is now the party to these agreements as they primarily address only Balancing Authority matters required for compliance with the reliability standards issued by the North American Electric Reliability Corporation ("NERC"), such as emergency assistance arrangements. See also "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY – Western Energy Imbalance Market."

Reliability Standards. The Energy Policy Act of 2005 gave FERC authority to enforce reliability standards for the bulk electric system. In June 2007, these standards became mandatory for SMUD and BANC.

In 2022, SMUD and BANC underwent a combined NERC/WECC audit to evaluate compliance with applicable reliability standards. These audits occur every three years. At the conclusion of the audit, regulators determined that neither entity had any compliance violations related to the Operations and Planning or Critical Infrastructure Protection Standards. SMUD and BANC will undergo another NERC/WECC audit sometime in 2025.

Balancing Authority of Northern California. SMUD, MID, Redding and Roseville executed a Joint Exercise of Powers Agreement (the "BANC JPA Agreement") creating BANC on May 8, 2009. BANC became operational on May 1, 2011 as a Balancing Authority and replaced SMUD as the entity responsible for Balancing Authority-related reliability standards. Since that time, the Trinity Public Utilities District and the City of Shasta Lake have also become members of BANC. As provided in the BANC member agreement, liability for penalties associated with such Balancing Authority-related reliability standards are shared on a *pro rata* basis among the members of BANC. SMUD is the Balancing Authority operator under contract and performs Balancing Authority operational functions on behalf of BANC, much as it did when it was the Balancing Authority. The BANC JPA Agreement assigns cost responsibility based on member load within the BANC Balancing Authority, with SMUD representing approximately 70% of the total load.

Power Pool and Other Agreements

Western Power Pool Agreement. The Western Power Pool ("WPP") is an agreement among over 30 utilities and public agencies in the western United States to coordinate contingency reserve sharing,

referred to as the WPP Reserve Sharing Program (“RSP”). The RSP permits participants to rely on one another in the event that any participant experiences a generating resource outage. While SMUD became an RSP participant in 2009, participation is limited to Balancing Authorities, which SMUD relinquished to BANC in 2011. Under the RSP, BANC and TID (also a WPP member) share their reserve amounts and when necessary and when sufficient unused COTP rights and capacity are available, may call upon WPP reserves from the RSP member systems in the Pacific Northwest. The WPP RSP permits members to operate more efficiently by reducing the contingency reserves that they would otherwise need to have available if they could not rely on each other.

TANC-SMUD OASIS Administration Agreement. SMUD entered into an agreement with TANC to provide OASIS services (transmission sales and scheduling related services in the BANC BA of TANC members’ COTP rights) on September 29, 2005. SMUD is compensated for performing these services. TANC and SMUD entered into a letter agreement dated October 25, 2010 to clarify each party’s role for regulatory reliability standards compliance responsibilities and take into account SMUD’s increased efforts related to supporting TANC’s compliance requirements. SMUD and TANC entered into an agreement to transition this service to the Western Area Power Administration, effective on May 1, 2023. Going forward SMUD will only have a minor role in receiving payments and distributing revenues to the TANC members.

Other Interconnection Agreements

Background. SMUD’s electric system was originally purchased from PG&E in 1947. SMUD’s service area is mostly surrounded by PG&E’s and WAPA’s service areas. The SMUD and PG&E electric systems are interconnected at SMUD’s Rancho Seco and Lake 230-kV substations. SMUD and WAPA are interconnected at SMUD’s Hurley, Elverta, Natomas and Folsom 230-kV substations.

PG&E Interconnection Agreement. PG&E and SMUD executed a Replacement Interconnection Agreement (“RIA”) which became effective on January 1, 2010. The RIA provides that SMUD and PG&E operate their interconnections reliably, plan their electric systems to meet their load requirements, and avoid or mitigate impacts they cause by certain electric system modifications. The agreement has a termination date of December 31, 2024, subject to FERC approval. SMUD and other northern California utilities have similar interconnection agreements with PG&E, albeit with different expiration dates. PG&E filed a successor interconnection agreement with one of these utilities, TID, on November 1, 2023, to become effective on January 1, 2024. Many interconnection customers, including SMUD, intervened and submitted comments or protests in the FERC docket. FERC accepted the filing and TID and PG&E are now in a settlement process, pending litigation if the parties cannot resolve the disputed items. SMUD anticipates that PG&E will seek to negotiate a successor interconnection agreement with SMUD which will be informed by the TID settlement or litigation process. While some functional mechanisms in the interconnection agreement may change, SMUD expects that its successor interconnection agreement will substantially preserve the balance of burdens and benefits consistent with FERC’s standard of requiring rates and terms of service that are just and reasonable. SMUD expects this process to be completed by the current expiration date of the RIA.

PG&E Generator Interconnection Agreements. SMUD signed a LGIA with CAISO and PG&E for the Solano 3 Wind Project, effective December 16, 2008, with a 50-year term. The Solano 2 Wind Project has interconnection rights granted through a LGIA, also with the CAISO and PG&E. The agreement became effective in January 2010 and has a term of 20 years. On June 3, 2021, SMUD entered into a LGIA with the CAISO and PG&E, for the planned 90.8 MW Solano 4 Wind project with a 10-year term and automatic renewal for successive one-year terms thereafter. On February 27, 2023, SMUD completed a combined LGIA amendment administrative process which combines the Solano 2, 3 & 4 projects into one Solano Wind Project. The original agreement conditions for the individual projects are carried forward with

a new combined project maximum production limit of 320.8 MW at the point of interconnection at the Russell Substation.

Other PG&E generator interconnection agreements include a Small Generator Interconnection Agreement with PG&E for Slab Creek with a 22-year term which became effective on January 14, 2010, and a Small Generator Interconnection Agreement with PG&E for the Chili Bar Project with a 10-year term which became effective on June 2, 2021.

WAPA Interconnection Agreement and other WAPA Agreements. SMUD and WAPA executed an interconnection agreement on May 8, 2008 for a term of 40 years which establishes the terms and conditions under which the SMUD and WAPA transmission systems are interconnected and memorializes related understandings. SMUD is working with WAPA on a reconfiguration at the shared Elverta interconnection to increase reliability and accommodate new generation interconnection in the area. SMUD has other agreements with WAPA including for operation of the Sutter Energy Center generating facility, communication systems terms and fiber optic access, training and for use of WAPA labor and heavy equipment to assist SMUD's maintenance activities on an as-available basis.

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SELECTED OPERATING DATA

Selected operating data of SMUD for the four years ended December 31, 2020 through 2023 are presented in the following table.

SMUD SELECTED OPERATING DATA CUSTOMERS, SALES, SOURCES OF ENERGY AND REVENUES

	Year Ended December 31,			
	2023	2022	2021	2020
Customers at End of Period:				
Residential	588,308	576,471	572,786	568,741
Commercial and industrial	70,147	69,512	69,426	68,628
Other	7,253	7,290	7,345	7,354
Total	665,708	653,273	649,557	644,723
MWh Sales:				
Residential	4,676,766	4,763,277	4,749,079	4,906,566
Commercial and industrial	5,374,936	5,805,052	5,649,474	5,453,120
Other	52,660	53,965	54,473	55,590
Total	10,104,362	10,622,294	10,453,026	10,415,276
Surplus power/out of area sales	4,143,139	2,493,651	2,774,907	2,259,991
Total	14,247,501	13,115,945	13,227,933	12,675,267
Sources of Energy Sold MWh:				
Generated by SMUD	7,270,858	4,368,126	6,776,244	6,414,380
Purchased or exchanged	7,308,120	9,162,576	6,884,003	6,691,279
Total	14,578,978	13,530,702	13,660,247	13,105,659
Less System losses and SMUD usage	331,477	414,757	432,314	430,392
Total	14,247,501	13,115,945	13,227,933	12,675,267
Gross System peak demand (kW) ⁽¹⁾	3,059,000	3,263,000	3,019,000	3,057,000
Average kWh sales per residential customer ⁽²⁾	8,018	8,293	8,316	8,650
Average Revenue per kWh Sold:				
Residential ⁽²⁾ (cents)	16.87	16.73	16.20	15.27
Commercial & industrial ⁽²⁾ (cents)	15.00	13.97	13.95	13.17

⁽¹⁾ Peak system MW values are measured at the four SMUD interconnection points and exclude SMUD's generation losses. Historical values include the impacts of dispatchable, non-dispatchable, and energy efficiency program capacity savings.

⁽²⁾ The average kWh sales per residential customer and the average revenue per kWh sold are calculated based upon billed and unbilled sales.

Source: SMUD

SELECTED FINANCIAL DATA

SMUD Financial Information

The following table presents selected financial data of SMUD. Under generally accepted accounting principles, data with respect to SMUD's component units, such as the Authorities, is included with that of SMUD. The following presents data for SMUD only and not its component units, such as the Authorities. SMUD's audited financial statements for the years ended December 31, 2023 and December 31, 2022 [are included in APPENDIX B attached to this Official Statement]. The following unaudited data for SMUD (excluding its component units) is drawn from SMUD's financial records that have been subjected to the auditing procedures applied in the audits of SMUD's and its component units financial statements for the years ended December 31, 2020 through 2023.

SMUD FINANCIAL DATA⁽¹⁾
(thousands of dollars)

Year Ended December 31,

	2023	2022 (Restated)	2021 (Restated)	2020
Summary of Income				
Operating Revenues ⁽²⁾	\$ 1,918,854	\$ 2,138,655	\$ 1,784,290	\$1,582,979
Operating Expenses	(1,772,503)	(2,102,451)	(1,464,069)	(1,397,845)
Operating Income	146,351	36,204	320,221	185,134
Interest and Other Income	145,035	124,480	108,788	63,014
Interest Expense	(73,275)	(74,702)	(81,692)	(80,699)
Change in Net Position	\$ 218,111	\$ 85,982	\$ 347,317	\$ 167,449
Selected Statement of Net Position Information				
Net Plant in Service	\$ 3,652,422	\$ 3,682,180	\$ 3,502,335	\$3,234,208
Construction Work in Progress	587,722	323,499	365,478	460,155
Electric Utility Plant – Net	<u>\$ 4,240,144</u>	<u>\$ 4,005,679</u>	<u>\$ 3,867,813</u>	<u>\$3,694,363</u>
Unrestricted Cash	\$ 534,157	\$ 591,410	\$ 569,001	\$ 662,155
Rate Stabilization Fund	\$ 212,131	\$ 156,016	\$ 188,992	\$ 168,726
Total Assets	\$ 6,610,818	\$ 6,447,908	\$ 6,096,865	\$5,826,449
Net Position	\$ 2,596,004	\$ 2,377,893	\$ 2,291,910	\$1,944,593
Long-Term Debt ⁽³⁾	\$ 2,305,156	\$ 2,236,824	\$ 2,387,686	\$2,523,921
Debt Service Coverage Ratios				
Parity Debt Service Coverage Ratio...	2.58x	1.86x	2.59x	2.25x
Parity and Subordinate Debt Service Coverage Ratio	2.44x	1.78x	2.47x	2.14x

⁽¹⁾ The financial statements of SMUD comprise financial information of SMUD along with its component units, CVFA, SPA, SCA, SFA, NCGA and NCEA. This table includes only financial information of SMUD excluding its component units. Net operating revenues and expenses and Electric Utility Plant and Capitalization of CVFA, SPA, SCA, SFA, NCGA and NCEA are not included in this table, although amounts paid to or received from the Authorities by SMUD are included.

⁽²⁾ Operating Revenues reflect net transfers to (from) the Rate Stabilization Fund for each full year as follows:
2023 \$56.1 million
2022 (\$33.0) million
2021 \$20.3 million
2020 \$25.1 million

Transfers to the Rate Stabilization Fund reduce operating revenues in the year transferred; transfers from the Rate Stabilization Fund increase operating revenues. Transfers from the HGA balancing account in the Rate Stabilization Fund are automatic based on the amount of precipitation received. See “RATES AND CUSTOMER BASE – Rates and Charges” above.

⁽³⁾ Long-Term Debt includes Long-Term Debt due within one year and unamortized premiums.

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Financial Information of SMUD and the Authorities

The following table presents a summary of selected financial information for SMUD and the Authorities.

SUMMARY OF FINANCIAL INFORMATION OF SMUD AND THE AUTHORITIES FOR THE YEARS ENDED DECEMBER 31, 2023 AND 2022 (RESTATED) (thousands of dollars)

	Year Ended December 31, 2023			Year Ended December 31, 2022 (Restated)		
	SMUD	Authorities	Total ⁽¹⁾	SMUD	Authorities	Total ⁽¹⁾
Summary of Income						
Operating Revenues ⁽²⁾	\$ 1,918,854	\$ 314,464	\$ 1,930,664	\$ 2,138,655	\$ 166,674	\$ 2,147,334
Operating Expenses	(1,772,503)	(278,519)	(1,748,368)	(2,102,451)	(120,798)	(2,065,254)
Operating Income	146,351	35,945	182,296	36,204	45,876	82,080
Interest and Other Income	145,035	17,944	136,217	124,480	1,871	89,820
Interest Expense.....	(73,275)	(25,516)	(98,791)	(74,702)	(26,482)	(101,184)
Change in Net Position.....	\$ 218,111	\$ 28,373	\$ 219,722	\$ 85,982	\$ 21,265	\$ 70,716
Selected Statement of Net Position Information						
Net Plant in Service	\$3,652,422	\$ 288,235	\$3,653,965	\$3,682,180	\$ 285,346	\$3,680,736
Construction Work in Progress.....	587,722	2,937	590,659	323,499	24,259	347,758
Electric Utility Plant – Net	\$4,240,144	\$ 291,172	\$4,244,624	\$4,005,679	\$ 309,605	\$4,028,494
Unrestricted Cash	\$ 534,157	\$ 36,458	\$ 570,615	\$ 591,410	\$ 36,454	\$ 627,864
Rate Stabilization Fund	\$ 212,131	--	\$ 212,131	\$ 156,016	--	\$ 156,016
Total Assets	\$6,610,818	\$1,105,825	\$7,320,723	\$6,447,908	\$1,133,460	\$7,217,304
Net Position.....	\$2,596,004	\$ 273,616	\$2,586,699	\$2,377,897	\$ 271,836	\$2,366,977
Long-Term Debt ⁽³⁾	\$2,305,156	\$ 753,465	\$3,058,621	\$2,236,824	\$ 787,215	\$3,024,039

⁽¹⁾ Financial information for SMUD and the SMUD JPAs (CVFA, SPA, SCA, SFA, NCGA and NCEA) include intercompany balances. The financial information reflects balances after the elimination of intercompany accounts including Authorities distributions to SMUD of \$26.8 million in 2023 and \$36.5 million in 2022.

⁽²⁾ Operating Revenues reflect net transfers to (from) the Rate Stabilization Fund as follows:
2023 \$56.1 million
2022 (\$33.0) million

Transfers to the Rate Stabilization Fund reduce operating revenues in the year transferred; transfers from the Rate Stabilization Fund increase operating revenues. Transfers from the HGA balancing account in the Rate Stabilization Fund are automatic based on the amount of precipitation received. See “RATES AND CUSTOMER BASE – Rates and Charges” above.

⁽³⁾ Long-Term Debt includes Long-Term Debt due within one year and unamortized premiums.

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Management's Discussion of SMUD's Operating Results

Year Ended December 31, 2023. For the year ended December 31, 2023, SMUD reported an increase in net position of \$218.1 million as compared to an increase of \$70.7 million for 2022.

Operating revenues were \$228.5 million lower than 2022. This was primarily due to lower sales of surplus gas (\$118.3 million), transfers to the RSF (\$67.2 million), sales to customers (\$28.3 million), transfers from the RSF (\$21.9 million), and LCFS revenue (\$3.9 million), partially offset by higher sales of surplus power (\$13.6 million), AB 32 revenue (\$3.7 million), customer fees (\$1.1 million), and lower transmission revenue (\$2.3 million).

Operating expenses were \$292.8 million lower than 2022. This was primarily due to lower purchased power expenses (\$175.5 million), production operating expenses (\$146.4 million), depreciation expenses (\$22.7 million), production maintenance expenses (\$12.3 million), transmission and distribution operating expenses (\$7.2 million), partially offset by higher administrative and general expenses (\$33.4 million), transmission and distribution maintenance expenses (\$15.8 million), public good expenses (\$8.8 million), and customer service and information expenses (\$6.6 million).

Non-Operating income increased by \$55.2 million primarily due to fair market value assessment and gain on sale of land (\$33.3 million), higher interest income (\$21.7 million), higher unrealized holding gains (\$11.4 million), higher CCA revenue (\$5.7 million), partially offset by lower investment income (\$39.1 million).

Interest expense decreased \$27.9 million from 2022.

Year Ended December 31, 2022. For the year ended December 31, 2022, SMUD reported an increase in net position of \$70.7 million as compared to an increase of \$347.3 million for 2021.

Operating revenues were \$363.0 million higher than 2021. This was primarily due to higher sales to customers (\$130.7 million), sales of surplus gas (\$96.0 million), sales of surplus power (\$62.2 million), transfers to the RSF (\$28.9 million), transfers from the RSF (\$24.3 million), customer fees (\$9.5 million), AB 32 revenue (\$4.9 million) and LCFS revenue (\$2.2 million), partially offset by lower gain on sale of carbon allowance futures (\$3.7 million).

Operating expenses were \$601.2 million higher than 2021. This was primarily due to higher purchased power expenses (\$263.6 million), amortization of pension and OPEB (\$126.9 million), production operating expenses (\$125.1 million), depreciation expense (\$49.5 million), transmission and distribution maintenance expenses (\$22.1 million), production maintenance expenses (\$18.4 million), transmission and distribution operating expenses (\$8.1 million), public good expenses (\$7.4 million), and customer service and information expenses (\$4.5 million), partially offset by lower administrative and general expenses (\$27.4 million).

Non-Operating income decreased by \$19.0 million primarily due to lower grant revenue (\$39.6 million), unrealized holding losses (\$3.7 million), partially offset by higher investment income (\$19.7 million), closeout of escrow account (\$2.8 million), and loss on asset retirements (\$1.9 million).

Interest expense increased \$19.5 million from 2021.

Regulatory Assets. In accordance with Governmental Accounting Standards Board ("GASB") No. 62, "Regulated Operations," SMUD defers, as regulatory assets, certain types of expenditures. These assets are amortized and collected through future rates.

As of December 31, 2023, SMUD had a total of \$916.1 million recorded for regulatory assets. Regulatory assets associated with costs related to implementation of GASB No. 68 which requires SMUD to record a net pension liability was \$323.5 million and deferred outflows related to GASB No. 68 was \$174.6 million at December 31, 2023. Regulatory assets associated with costs related to implementation of GASB No. 75 which requires SMUD to record a net Other Post Employment Benefit (OPEB) liability was \$268.2 million and deferred outflows related to GASB No. 75 was \$39.6 million at December 31, 2023. Regulatory assets associated with Rancho Seco decommissioning costs totaled \$108.0 million at December 31, 2023. Nuclear fuel storage costs and non-radiological decommissioning costs have been collected in rates since 2009. For a complete description of these regulatory assets, see Note 8 (Regulatory Deferrals) to SMUD's financial statements.

The Board has authorized the deferral of any charges or credits that result from the change in valuation of ineffective hedges that should be reported as Investment Revenue/Expense on the Statements of Revenues, Expenses and changes in net position. The Board's resolution establishes that such charges or credits are not included in rates based on market value changes but are included in rates when the underlying transactions occur. Therefore, under GASB No. 62, "Regulated Operations," any such changes are included in the Statement of Net Position as regulatory assets or liabilities. For a complete description of these derivative financial instruments, see Note 9 (Derivative Financial Instruments) to SMUD's financial statements.

RANCHO SECO DECOMMISSIONING

Overview. The 913 MW Rancho Seco Nuclear Power Plant ("Rancho Seco") began Nuclear Regulatory Commission ("NRC") licensed operations in 1974. In June 1989, the electorate of SMUD voted against allowing SMUD to continue to operate Rancho Seco as a nuclear generating facility, and the plant was shut down. In 1991, SMUD submitted a report (the "Financial Assurance Plan") providing required financial assurance to the NRC that SMUD will have sufficient funds available to pay for the cost of decommissioning. On March 17, 1992, the NRC granted SMUD a change from an operating to a possession-only license for Rancho Seco that relieved SMUD from compliance with a number of NRC regulations applicable to operating nuclear power plants. SMUD also filed a proposed decommissioning plan with the NRC (the "Decommissioning Plan"), which was approved in March 1995.

After the decommissioning efforts began, no suitable disposal option was available to SMUD for the Class B and Class C low level radioactive waste generated during the plant decommissioning. With the used nuclear fuel stored onsite requiring oversight staff, SMUD opted to store the Class B and Class C radioactive waste in an existing interim onsite storage building until a suitable disposal option was available. In November 2007, the possession-only license for Rancho Seco was amended to update the Decommissioning Plan to terminate the possession-only license for the Class B and Class C waste in two phases. Phase I of the decommissioning was completed at the end of 2008. Following verification of the site conditions, SMUD submitted a request to the NRC to reduce the licensed facility from 2,480 acres to the interim onsite storage building and about one acre surrounding it. The request was approved by the NRC in September 2009. Phase II of decommissioning included the approximately two-acre interim storage building containing the Class B and Class C radioactive waste and surrounding area. In September 2013, SMUD entered into a contract with the operator of the low-level radioactive waste disposal facility located in Andrews, Texas. Shipment of the Class B and Class C radioactive waste for disposal was completed in November 2014. SMUD conducted additional clean-up activities and radiological surveys, which were followed by NRC confirmatory surveys. The results of these surveys demonstrated unit dose criteria well below NRC release criteria, and the NRC approved the Phase II area for unrestricted use. On September 21, 2017, SMUD formally requested the termination of the possession-only license. On August

31, 2018, the NRC officially terminated SMUD's possession-only license for the remaining Class B and Class C waste at Rancho Seco.

As part of the Decommissioning Plan, the nuclear fuel and Greater Than Class C ("GTCC") radioactive waste is being stored in a dry storage facility (the Independent Spent Fuel Storage Installation or "ISFSI") constructed by SMUD, adjacent to the former reactor facility. The NRC has separately licensed this facility. The DOE, under the Nuclear Waste Policy Act of 1982, is responsible for permanent disposal of used nuclear fuel and GTCC radioactive waste. SMUD has a contract with the DOE for the removal and disposal of this waste. The DOE was to have a waste repository operating by 1998, but has experienced significant and ongoing delays. The Nuclear Waste Policy Act designates Yucca Mountain in Nevada as the final and exclusive repository for the nation's used nuclear fuel. The DOE discontinued the Yucca Mountain license review activities in 2010, but after a court ordered the NRC to resume its review in 2013, the NRC published its final safety evaluation report in 2015. The final safety report, and the final environmental impact statement, concluded that the proposed repository would be safe and environmentally sound for one million years.

Nevertheless, seeking alternatives to Yucca Mountain, the Blue-Ribbon Commission on America's Nuclear Future delivered its final report in January 2012 with several recommendations. The DOE responded to the recommendations by issuing a report in January 2013 (Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste). Key to both documents is a focus on used fuel from decommissioned sites including Rancho Seco. The DOE report accepts most of the Blue-Ribbon Commission recommendations, and contains timelines for fuel management options which proposed removing the fuel from Rancho Seco as early as 2021. However, any progress on the strategies proposed by the DOE is dependent on legislative action by Congress. With no legislative action taken to date, the 2021 projected date for fuel removal slips year-for-year. Therefore, SMUD cannot determine at this time when the DOE will fulfill its contractual obligations to remove the nuclear fuel and GTCC waste from the Rancho Seco facility. In the meantime, SMUD continues to incur costs of approximately \$6 to \$7 million per year for storage of used nuclear fuel at the ISFSI. SMUD has filed a series of successful lawsuits against the federal government for recovery of past spent fuel costs. SMUD last recovered over \$14 million in 2023. SMUD plans to continue pursuing cost recovery claims to ensure it is reimbursed for all such costs in the future. The ISFSI will be decommissioned, and its license terminated after the fuel and GTCC is removed.

Financial Assurance Plan. In accordance with the Financial Assurance Plan, SMUD established and funded an external decommissioning trust fund currently held by Computershare Corporate Trust (the "Decommissioning Trust Fund"). Pursuant to the Financial Assurance Plan, SMUD made the final deposit into the Decommissioning Trust Fund in 2008. Additional deposits are not expected but will be made if increased cost estimates or reduced fund interest earnings require it. In 2011, the NRC began requiring that SMUD demonstrate financial assurance for decommissioning the ISFSI as well as the former power facility, increasing the overall cost for decommissioning Rancho Seco. The estimated total cost for decommissioning the ISFSI was approximately \$7.1 million on December 31, 2023. The decommissioning cost estimate is required to be updated every three years. As of December 31, 2023, the balance of the Decommissioning Trust Fund was \$9.4 million, excluding unrealized gains and losses. Based on the current decommissioning cost estimate and the value of the fund, SMUD's existing Decommissioning Trust Fund provides sufficient funds to complete decommissioning and terminate the ISFSI license.

In addition to these costs, SMUD also estimates that it would cost approximately \$13.1 million to restore the site to make it available for other SMUD uses with some major structures remaining intact. Site restoration is not a legal requirement. No site restoration is currently underway.

EMPLOYEE RELATIONS

SMUD has approximately 2,334 employees, most of whom are covered by a civil service system. SMUD is a contracting member of the California Public Employees' Retirement System ("PERS"). Approximately 50% of SMUD's work-force is represented as to wages, hours and other terms and conditions of employment, by one of three recognized employee organizations, the International Brotherhood of Electrical Workers ("IBEW") Local 1245, the Organization of SMUD Employees ("OSE"), and the SMUD Public Safety Officers' Association ("PSOA"). The remaining 50% of SMUD's work-force, which includes managers, professional, administrative, supervisory, confidential and security staff, is unrepresented.

SMUD negotiated a four-year Memoranda of Understanding ("MOU") with IBEW and the OSE, effective January 1, 2022, through December 31, 2025. Both contracts contain a no-strike/no-lockout clause effective during the life of the agreements. SMUD has an MOU with PSOA effective through December 31, 2026. SMUD has experienced only one labor interruption, which occurred in January 1980 that lasted four days.

RETIREMENT BENEFITS AND POST-EMPLOYMENT MEDICAL BENEFITS

Pension Plans

SMUD participates in PERS, an agent multiple-employer public employee defined benefit pension plan. PERS provides retirement and disability benefits, annual cost-of-living adjustments, and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. Benefit provisions and all other requirements are established by State statute and SMUD policies. The pension plan provides retirement benefits, survivor benefits, and death and disability benefits based upon employees' years of credited service, age, and final compensation.

As of June 30, 2022, the last actuarial valuation date for SMUD's plan within PERS, the market value of the SMUD plan assets was \$2.32 billion. The plan is 87.8% funded on a market value of assets basis, a decrease of 12.3% compared to the June 30, 2021 funded status based on the market value of assets.

As an employer, SMUD is required to contribute a percentage of payroll each year to PERS to fund SMUD's plan based on actuarial valuations performed by PERS. PERS collects the normal cost based on a percentage of payroll and the unfunded liability portion is based on a dollar amount. SMUD also makes partial contributions required of SMUD employees on their behalf and for their account. At the PERS fiscal year ended June 30, 2023, SMUD's required employer contribution rate for normal cost was 8.9% of payroll and the unfunded liability contribution was \$22.4 million. During 2023, SMUD contributed \$37.4 million to PERS (including SMUD's contributions to cover required employee contributions), and SMUD employees paid \$18.3 million for their share of the PERS contribution.

For the fiscal years ending June 30, 2024 and June 30, 2025, SMUD is required to contribute 9.6% and 9.5% of payroll for normal costs and \$10.7 million for fiscal year ending June 30, 2025 for the unfunded liability contribution. There is no estimated employer contribution to the unfunded liability for fiscal year ending June 30, 2024. Assuming no amendments to the plan and no liability gains or losses (which can have a significant impact), PERS has projected that SMUD will be required to contribute 9.4% of payroll to the plan for normal costs and \$15.7 million for the unfunded liability for the fiscal year ending June 30, 2026, not including SMUD contributions to cover required employee contributions. The amount SMUD is required to contribute to PERS is expected to increase in the future. The actual amount of such increases

will depend on a variety of factors, including but not limited to investment returns, actuarial methods and assumptions, experience and retirement benefit adjustments.

SMUD has the option to prepay an annual lump sum payment to PERS for the unfunded accrued liability portion only (not including SMUD contributions to cover required employee contributions). SMUD made an annual lump sum prepayment of \$19.5 million, and also voluntarily made an additional payment of \$47.3 million, for the unfunded accrued liability for the fiscal year ended June 30, 2023. SMUD was not required to make an annual lump sum prepayment and, to date, has not voluntarily made additional payments for the unfunded accrued liability for the fiscal year ending June 30, 2024.

While SMUD has some ability to adjust the retirement benefits provided to its employees, PERS determines the actuarial methods and assumptions used with respect to assets administered by PERS (including the SMUD plan assets) and makes the investment decisions with respect to such assets. For a description of such actuarial methods and assumptions (including the smoothing conventions used by PERS when setting employer contribution rates) and investments, see the comprehensive annual financial report of PERS (SMUD's plan is part of the Public Employees' Retirement Fund of PERS) available on its website at www.calpers.ca.gov. SMUD cannot guarantee the accuracy of such information and neither the comprehensive annual financial report of PERS nor any other information contained on the PERS website is incorporated by reference in or part of this Official Statement. Actuarial assessments are "forward-looking" information that reflect the judgment of the fiduciaries of the pension plans, and are based upon a variety of assumptions, one or more of which may prove to be inaccurate or be changed in the future. Actuarial assessments will change with the future experience of the pension plans.

GASB issued statement No. 68 "Accounting and Financial Reporting for Pensions – An Amendment of GASB Statement No. 27" ("GASB No. 68"). The primary objective of GASB No. 68 is to improve accounting and financial reporting by state and local governments for pensions. Under GASB No. 68, SMUD is required to report the net pension asset or net pension liability (i.e., the difference between the total pension liability and the pension plan's net position or market value of assets) in its Statement of Net Position. This standard requires shorter amortization periods for recognition of non-investment gains and losses and actuarial assumption changes, as well as for recognition of investment gains and losses. GASB No. 68 separates financial reporting from funding requirements for pension plans. The net pension liability as of December 31, 2023 and December 31, 2022 is \$259.0 million and \$235.5 million, respectively.

SMUD provides its employees with two cash deferred compensation plans: one pursuant to Internal Revenue Code ("IRC") Section 401(k) (the "401(k) Plan") and one pursuant to IRC Section 457 (the "457 Plan" and collectively, the "Plans"). The Plans are contributory plans in which SMUD's employees contribute the funds. Each of SMUD's eligible full-time or permanent part-time employees may participate in either or both Plans, and amounts contributed by employees are vested immediately. Such funds are held by a trustee in trust for the employees upon retirement from SMUD service and, accordingly, are not subject to the general claims of SMUD's creditors. SMUD makes annual contributions to the 401(k) Plan on behalf of certain employees pursuant to a memorandum of understanding with both of its collective bargaining units. SMUD matches non-represented employee contributions to the 401(k) Plan up to a set amount. SMUD also makes limited discretionary contributions to non-represented employees hired after January 1, 2013, which contributions fully vest after five years. Prior to 2022, SMUD did not match employee contributions, nor make contributions on behalf of its employees to the 457 Plan. Beginning in 2022, SMUD makes annual contributions to the 457 Plan on behalf of certain employees and matches employee contributions up to a set amount pursuant to a memorandum of understanding with one of its collective bargaining units. SMUD made contributions to both Plans of \$6.9 million in 2023 and to the 401(k) Plan of \$7.0 million in 2022. Participating employees made contributions into both Plans totaling \$34.3 million in 2023 and \$32.4 million in 2022.

Other Post-Employment Benefits

SMUD provides post-employment healthcare benefits, in accordance with SMUD policy and negotiated agreements with employee representation groups in a single employer defined benefit plan, to all employees who retire from SMUD, and their dependents. SMUD also provides post-employment healthcare benefits to covered employees who are eligible for disability retirement. SMUD contributes the full cost of coverage for retirees hired before January 1, 1991, and a portion of the cost based on credited years of service for retirees hired after January 1, 1991. SMUD also contributes a portion of the costs of coverage for these retirees' dependents. Retirees are required to contribute the portion that is not paid by SMUD. The benefits, benefit levels, retiree contributions and employer contributions are governed by SMUD and can be amended by SMUD through its personnel manual and union contracts.

SMUD's post-employment health care benefits are funded through the PERS California Employers' Retiree Benefit Trust ("CERBT"), an agent multiple-employer plan. The funding of a plan occurs when the following events take place: the employer makes payments of benefits directly to or on behalf of a retiree or beneficiary; the employer makes premium payments to an insurer; or the employer irrevocably transfers assets to a trust or other third party acting in the role of trustee, where the plan assets are dedicated to the sole purpose of the payments of the plan benefits, and creditors of the government do not have access to those assets.

SMUD has elected to contribute the normal costs to the CERBT but annually receive reimbursement for cash benefit payments from the CERBT. In 2024, SMUD's contribution for the normal costs to CERBT is \$10.6 million. In 2023, SMUD made a contribution to the CERBT for normal costs in the amount of \$8.6 million. In 2022, SMUD decided to forgo making a contribution for the normal costs to the CERBT because there was a net OPEB asset at December 31, 2021. SMUD can elect to make additional contributions to the trust. During 2023 and 2022, SMUD made healthcare benefit contributions by paying actual medical costs of \$24.7 million and \$24.5 million, respectively. During 2023 and 2022, SMUD received \$24.4 million and \$23.3 million, respectively, reimbursement for cash benefit payments from the CERBT.

At June 30, 2023 and 2022, SMUD estimated that the actuarially determined accumulated post-employment benefit obligation was approximately \$403.6 and \$381.7 million, respectively. At June 30, 2023 and 2022, the plan was 92.3% and 97.9% funded, respectively.

SMUD's actuary uses PERS economic and other assumptions as the basis for the calculation of the post-employment benefit obligation. The actual accumulated post-employment benefit obligation will vary substantially if such PERS assumptions, such as interest rate and life expectancy, among others, prove to be inaccurate or different than SMUD's actual experience. Although SMUD believes that such assumptions and estimates are reasonable, no assurance can be given that any such assumptions will prove to be accurate, or that SMUD's actual accumulated post-employment benefit obligation will not materially exceed its estimates. Additional information is available in Note 15 (Other Postemployment Benefits) and "Required Supplementary Information" to SMUD's consolidated financial statements.

GASB previously issued SGAS No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other than Pensions". The primary objective of GASB No. 75 is to improve accounting and financial reporting by state and local governments for post-employment benefits other than pensions ("OPEB"). Under GASB No. 75, SMUD is required to report the net OPEB asset or net OPEB liability (i.e., the difference between the total OPEB liability and the OPEB plan's net position or market value of assets) in its Statement of Net Position. This standard requires shorter amortization periods for recognition of non-investment gains and losses and actuarial assumption changes, as well as for recognition of

investment gains and losses. The net OPEB liability as of December 31, 2023 and December 31, 2022 is \$25.3 million and \$6.8 million, respectively.

CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS

Estimated Capital Requirements

SMUD has a projected capital requirement of approximately \$2.8 billion for the period 2024 through 2028 as shown in the table below. Approximately 60% of this requirement is anticipated to be funded with internally generated funds and cash on hand.

Special projects include costs relating to construction of large substations and the construction of Solano Phase 4. The Estimated Capital Requirements table below includes \$51 million for Solano Phase 4. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – Solano 4 Project.”

ESTIMATED CAPITAL REQUIREMENTS (Dollars in Thousands)

	Service Area and Other System Improvements Including Distribution System	Improvements to Existing Generation Plant	General Plant	Special Projects	Total Capital Requirements
2024	\$193,180	\$58,070	\$132,454	\$169,315	\$553,019
2025	250,507	72,551	171,736	82,431	577,225
2026	237,026	108,614	138,112	64,880	548,632
2027	237,026	108,614	138,112	64,880	548,632
2028	237,026	108,614	138,112	64,880	548,632

Outstanding Indebtedness

General. SMUD typically finances its capital requirements through the sale of revenue bonds, the sale of commercial paper, from draws on its Revolving Credit Facility (as defined below) and from internally generated funds. With the enactment of the 2022 Inflation Reduction Act and the 2021 Infrastructure Investment and Jobs Act, SMUD is monitoring and exploring new methods of financing, including those afforded under these two federal laws, that provide not-for-profit public power utilities with direct federal incentive payments.

SMUD’s Electric Revenue Bonds (the “Senior Bonds”) are issued pursuant to Resolution No. 6649 (the “Senior Resolution”) adopted in 1971, as amended and supplemented (the “Senior Resolution”). As of December 31, 2023, SMUD had Senior Bonds in the aggregate principal amount of \$1,783,965,000 outstanding. The Senior Bonds are payable solely from the Net Revenues of SMUD’s Electric System. The Senior Bonds are subordinate in right of payment to the prior payment of “Maintenance and Operation Costs” and “Energy Payments” as defined in the Senior Resolution, including payments by SMUD to TANC under PA3, payments by SMUD under power purchase agreements related to the Authorities and payments by SMUD to NCGA and NCEA under their respective gas supply contracts. [Reference to 2024 Senior Bond plan of finance to come]

SMUD’s Subordinated Electric Revenue Bonds (the “Subordinated Bonds”) are issued pursuant to Resolution No. 85-11-1 of SMUD, adopted on November 7, 1985, as amended and supplemented (the

“Subordinate Resolution”). As of December 31, 2023, SMUD had Subordinated Bonds in the aggregate principal amount of \$332,020,000 outstanding. The Subordinated Bonds are payable solely from the Net Subordinated Revenues of SMUD’s Electric System. The Subordinated Bonds are subordinate in right of payment to the prior payment of principal of and interest on the Senior Bonds.

SMUD issues commercial paper notes (the “Notes”) from time to time. As of March 21, 2024, SMUD’s Notes were outstanding in the aggregate principal amount of \$150,000,000. Currently, Notes in the aggregate principal amount of \$400,000,000 may be outstanding at any one time, but SMUD reserves the right to increase or decrease the aggregate principal amount of the Notes that may be outstanding at any one time in the future. The Notes are secured by letters of credit issued by commercial banks. The Notes (and SMUD’s obligations to repay drawings under the letters of credit) are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Senior Bonds and the Subordinated Bonds. Drawings under the letters of credit, to the extent not repaid immediately from the proceeds of commercial paper or other available SMUD funds, are repayable with interest over a period of five years. The letters of credit currently expire in August of 2025 and March of 2027. [Reference to 2024 Senior Bond plan of finance to come]

SMUD also entered into a revolving credit agreement with a commercial bank and issued its taxable and tax-exempt revolving notes thereunder (collectively, the “Revolving Credit Facility”) in February 2022. As of December 31, 2023, no principal amount was outstanding under the Revolving Credit Facility. Currently, the aggregate principal amount that can be outstanding under the Revolving Credit Facility at any one time is limited to \$100,000,000. However, SMUD reserves the right to increase or decrease the aggregate principal amount that can be outstanding at any one time under the Revolving Credit Facility in the future. SMUD’s payment obligations under the Revolving Credit Facility are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Senior Bonds and the Subordinated Bonds. The current term of the Revolving Credit Facility expires in February 2026.

Joint Powers Authorities. SMUD has entered into long-term take-or-pay power purchase agreements with SFA relating to the Local Gas-Fired Plants. Under such agreements, SMUD has exclusive control of the dispatch of all five of the Local Gas-Fired Plants and takes all of the power produced by the Local Gas-Fired Plants. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – Local Gas-Fired Plants.” The Authorities are each treated as component units of SMUD for accounting purposes. Only SFA has outstanding debt, which relates solely to the Cosumnes Power Plant and is payable solely from capacity payments made by SMUD under the related power purchase agreement. As of December 31, 2023, bonds issued by SFA to finance the Cosumnes Power Plant were outstanding in the aggregate principal amount of \$87,890,000. SMUD’s payments under the power purchase agreements relating to the Local Gas-Fired Plants are payable from revenues of SMUD’s Electric System prior to the payment of principal of and interest on the Senior Bonds and Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and Subordinate Resolution.

SMUD and Sacramento Municipal Utility District Financing Authority formed NCGA as a joint powers authority. NCGA is treated as a component unit of SMUD for accounting purposes. NCGA issued \$757,055,000 in bonds in May 2007 for the purpose of paying Morgan Stanley Capital Group in advance for natural gas to be delivered to NCGA and then sold to SMUD pursuant to a long-term purchase contract. SMUD’s obligation under the purchase contract is limited to payment for gas supplies delivered by NCGA. SMUD’s payments under the purchase contract are payable from revenues of SMUD’s Electric System prior to the payment of principal and interest on the Senior Bonds and the Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution. SMUD is not obligated to make any payments in respect of debt service on the

NCGA bonds. As of December 31, 2023, related bonds in the aggregate principal amount of \$120,070,000 remain outstanding.

SMUD and Sacramento Municipal Utility District Financing Authority formed NCEA as a joint powers authority. NCEA is treated as a component unit of SMUD for accounting purposes. NCEA issued \$539,615,000 in bonds in December 2018 for the purpose of paying J. Aron & Company LLC in advance for natural gas or electricity to be delivered to NCEA and then sold to SMUD pursuant to a long-term purchase contract. SMUD’s obligation under the purchase contract is limited to payment for gas or electricity supplies delivered by NCEA. SMUD’s payments under the purchase contract are payable from revenues of SMUD’s Electric System prior to the payment of principal and interest on the Senior Bonds and the Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution. SMUD is not obligated to make any payments in respect of debt service on the NCEA bonds. [As of December 31, 2023, related bonds in the aggregate principal amount of 537,295,000 remain outstanding. As described in the forepart of this Official Statement, the bonds issued by NCEA in 2018 are expected to be refunded with proceeds of the Bonds (as defined in the forepart of this Official Statement).] [to be revised for 2024 Senior Bond offering documents]

Interest Rate Swap Agreements. SMUD has two interest rate swap agreements relating to previously or currently outstanding Subordinated Bonds, as shown in the following table. For more information, see Note 9 (Derivative Financial Instruments) to SMUD’s consolidated financial statements.

Effective Date	Termination Date	SMUD Pays		SMUD Receives	Notional Amount (000's)	Counterparty
7/2/1997	7/1/2024	Floating	SIFMA	5.154%	\$19,570	J Aron & Company LLC
07/12/2023	08/15/2041	Fixed	0.718%	[70% of 1M SOFR]	132,020	Barclays Bank

The obligations of SMUD under the swap agreements are not secured by a pledge of revenues of SMUD’s electric system or any other property of SMUD. SMUD does not currently have any collateral posting requirements with respect to the interest rate swap agreements, but SMUD may be required to post collateral under certain circumstances.

Build America Bonds Subsidy Payments. SMUD’s Electric Revenue Bonds, 2009 Series V (the “2009 Series V Bonds”) and Electric Revenue Bonds, 2010 Series W (the “2010 Series W Bonds”) were issued as “Build America Bonds” under the provisions of the American Recovery and Reinvestment Act of 2009. At the time the 2009 Series V Bonds and 2010 Series W Bonds were issued, SMUD expected to receive an annual cash subsidy payment from the United States Treasury equal to 35% of the interest payable on the 2009 Series V Bonds and the 2010 Series W Bonds. However, as a result of the federal budget process, many payments from the federal government, including Build America Bonds subsidy payments, have been reduced. Absent the federal budget reductions, the aggregate annual cash subsidy payable to SMUD with respect to the 2009 Series V Bonds and the 2010 Series W Bonds would be approximately \$9.8 million. With the current federal budget reductions, SMUD has typically been receiving aggregate annual cash subsidy payments with respect to the 2009 Series V Bonds and the 2010 Series W Bonds of approximately \$9.2 million. It is possible that future federal budget actions could further reduce, or eliminate entirely, the annual cash subsidy payments with respect to Build America Bonds, including the annual cash subsidy payments payable to SMUD with respect to the 2009 Series V Bonds and the 2010 Series W Bonds. SMUD cannot predict the likelihood of the further reduction or elimination of the Build America Bonds subsidy payments. A significant reduction or elimination of the cash subsidy

payments payable to SMUD with respect to the 2009 Series V Bonds or the 2010 Series W Bonds could be material. [Reference to 2024 Senior Bonds plan of finance to come]

Debt Service Requirements. The table on the following page sets forth SMUD’s debt service requirements with respect to SMUD’s Senior Bonds and Subordinated Bonds.

DEBT SERVICE REQUIREMENTS[TO BE CONFIRMED/UPDATED] ⁽¹⁾

Calendar Year	Senior Bonds Debt Service⁽²⁾	Subordinated Bonds Debt Service⁽³⁾	Total Debt Service
2024	\$ 179,657,209	\$ 11,684,323	\$ 191,341,531
2025	178,911,687	11,780,665	190,692,352
2026	179,010,287	8,447,772	187,458,059
2027	179,097,037	8,947,772	188,044,809
2028	179,208,038	8,948,211	188,156,249
2029	127,829,725	8,947,332	136,777,056
2030	137,903,979	9,781,105	147,685,083
2031	143,512,870	6,447,772	149,960,641
2032	143,353,133	6,948,211	150,301,344
2033	143,215,040	6,947,332	150,162,371
2034	137,669,794	18,587,534	156,257,327
2035	138,018,961	18,159,537	156,178,498
2036	138,370,189	17,729,456	156,099,645
2037	78,304,801	25,303,354	103,608,154
2038	77,946,301	25,618,890	103,565,191
2039	74,594,300	25,935,859	100,530,159
2040	74,393,300	26,254,804	100,648,104
2041	79,238,550	26,889,177	106,127,727
2042	49,163,850	28,490,000	77,653,850
2043	48,951,650	28,490,300	77,441,950
2044	48,747,750	28,490,350	77,238,100
2045	48,539,450	28,494,550	77,034,000
2046	43,129,500	28,492,150	71,621,650
2047	43,129,500	28,492,700	71,622,200
2048	43,134,750	28,490,450	71,625,200
2049	43,131,000	28,489,800	71,620,800
2050	43,134,500	--	43,134,500
2051	17,740,500	--	17,740,500
2052	17,739,250	--	17,739,250
2053	17,739,750	--	17,739,750
Total	\$2,854,516,645	\$501,289,405	\$3,355,806,050

(1) Does not include outstanding bonds issued by the Authorities for the Local Gas-Fired Plants. Does not include bonds issued by NCGA, NCEA or SMUD’s portion of bonds issued by TANC. Payments by SMUD which are used by the Authorities, NCGA, NCEA, and TANC to pay debt service on such bonds constitute either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution.

(2) Debt service is not reduced by the amount of any subsidy that SMUD currently expects to receive in connection with the 2009 Series V Bonds and 2010 Series W Bonds.

(3) Based on an assumed interest rate of 3% per annum following (i) the initial scheduled Mandatory Purchase Date of October 15, 2030 for SMUD’s Subordinated Electric Revenue Refunding Bonds, 2023 Series D and (ii) the initial scheduled Mandatory Purchase Date of October 15, 2025 for SMUD’s Subordinated Electric Revenue Bonds, 2019 Series B.

Note: Amounts may not add due to rounding.

INSURANCE

SMUD maintains a comprehensive property/casualty insurance program designed to protect against catastrophic losses that would have an adverse effect on its financial position or operational capabilities. Insurance programs are continuously reviewed and modified when construction, operational exposures, or developments in the insurance industry so warrant. Long term relationships with a variety of insurers minimize SMUD's susceptibility to the effects of market cycles. SMUD budgets reserves to meet potential insurance deductibles and self-insured liability claims.

SMUD safeguards assets with all-risk property and boiler/machinery insurance with limits of \$800 million per occurrence for physical damage and business interruption combined. Various coverage sublimits and deductibles apply to losses arising from certain perils, such as business interruption, earthquake, or flood, respectively. Liability insurance is in effect to defend and indemnify SMUD against third party claims, including general, automobile and sudden and accidental pollution claims with policy limits of \$140 million, and wildfire coverage with policy limits of \$275 million, all of which include a variety of self-insured retentions.

Nuclear property and liability insurance policies are maintained in accordance with the NRC's requirements for decommissioned nuclear plants that maintain dry storage of spent fuel on-site. This includes \$100 million in first party property damage and decontamination, \$100 million for nuclear liability arising from accidents on-site, \$200 million for supplier's and transporter's nuclear liability, and \$300 million for nuclear worker liability. SMUD is exposed to possible retrospective assessments for nuclear property events occurring at other nuclear facilities in the United States capped at ten times SMUD's annual nuclear property premium (currently the maximum retrospective assessment is approximately \$1,000,000).

Other types of insurance include non-owned aircraft liability, workers' compensation, crime, cyber security, fidelity, fiduciary liability, directors' and officers' liability, professional errors and omissions, transportation, and builder's risk for major facilities under construction.

LEGAL PROCEEDINGS

SMUD is a party to numerous actions arising out of the conduct of its business and affairs, some of which are discussed below. SMUD believes that any losses or adverse financial results it may suffer in these current actions, to the extent not covered by insurance, would not, in the aggregate, have an adverse material impact on SMUD, its business and affairs, or results of operations, financial position or liquidity.

Environmental Litigation

SMUD was one of many potentially responsible parties that had been named in a number of actions relating to environmental claims and/or complaints. SMUD has resolved these environmental claims and/or complaints and entered into settlement agreements and/or consent orders. These settlement agreements and consent orders have statutory reopener provisions which allow regulatory agencies to seek additional funds for environmental remediation under certain limited circumstances. While SMUD believes it is unlikely that any of the prior settlements or consent orders will be reopened, the possibility exists. If any of the settlements or consent orders were to be reopened, SMUD believes that the outcome will not have a material adverse impact on SMUD's financial position, liquidity, or results of operations.

Proposition 26 Lawsuit

In October 2019, two SMUD customers jointly filed a complaint against SMUD (subsequently one of the customers removed themselves from the complaint), which stated that SMUD's Board violated

Proposition 26 (see “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – Proposition 26” for a description of Proposition 26) when on June 24, 2019, it adopted rate increases for 2020 and 2021. The plaintiff contended the rate increases did not reflect SMUD’s reasonable cost of service because they included a 9.2% scalar that SMUD applies to its TOD residential rate restructure adopted by SMUD’s Board in the 2017 rate process. SMUD viewed the lawsuit as having little merit and while SMUD anticipated the court would rule in SMUD’s favor on substantive grounds, the plaintiff in early 2024 agreed to dismiss the lawsuit with prejudice due to their failure to diligently prosecute the case. On January 16, 2024, the court approved the dismissal.

On January 19, 2024, the same plaintiff, along with a second SMUD residential customer, jointly filed a new complaint challenging the September 21, 2023, SMUD Board adoption of 2024 and 2025 rate increases. The plaintiffs make a similar claim regarding the TOD scalar as the prior lawsuit. Given the little merit behind the lawsuit, SMUD believes the court will rule in its favor. However, SMUD is unable to predict the outcome of the case or, if or to the extent SMUD ultimately is not successful in the litigation, what remedies against SMUD may be available. SMUD believes that if it is not successful in the litigation, and to the extent the outcome would have a material adverse impact on SMUD’s financial position, liquidity, or results of operations, the Board would make appropriate rate modifications based on an evidentiary record consistent with guidance from a judicial decision in the case.

Other Litigation Matters

Currently, SMUD is party to various claims, legal actions and complaints relating to its operations, including, but not limited to, property damage, personal injury, contract disputes, and employment matters. SMUD believes that the ultimate resolution of these matters will not have a material adverse effect on SMUD’s financial position, liquidity, or results of operations.

FERC Administrative Proceedings

SMUD is involved in a number of FERC administrative proceedings related to the operation of wholesale energy markets, regional transmission planning, gas transportation and NERC reliability standards. These proceedings generally fall into the following categories: (i) filings initiated by the CAISO (or other market participants) to adopt/modify the CAISO Tariff and/or establish market design and behavior rules; (ii) filings initiated by existing transmission owners (i.e., PG&E and the other IOUs) to pass-through costs to their existing wholesale transmission customers; (iii) filings initiated by FERC on market participants to establish market design and behavior rules or investigate market behavior by certain market participants; (iv) filings initiated by transmission owners under their transmission owner tariffs to establish a regional transmission planning process; (v) filings initiated by providers of firm gas transportation services under the Natural Gas Act; and (vi) filings initiated by NERC to develop reliability standards applicable to owners, users, and operators of the bulk electric system. In addition, SMUD is an active participant in other FERC administrative proceedings, including those related to reliability, variable resource integration and the changing resource mix, and transmission planning and cost allocation. SMUD believes that determinations of these FERC proceedings will not have a material adverse effect on SMUD’s financial position, liquidity or results of operations.

CPUC Administrative Proceedings

Periodically, PG&E seeks to update its gas transmission and storage (“GT&S”) revenue requirements and rate designs. These applications are litigated at the CPUC and affect SMUD through several tariff rates SMUD pays to move natural gas along PG&E’s backbone transmission lines. In the 2019 GT&S rate case (the “2019 GT&S Case”), the CPUC affirmed the application in GT&S rates of cost causation principles to prevent excessive and unreasonable costs being shifted to electric generator

backbone customers like SMUD, either through proposed changes in PG&E’s natural gas storage strategy or through cost shifts within the electric generator customer class.

PG&E filed its 2023 General Rate Case (the “GRC”) in June 2021 which includes its gas transmission and storage revenue requirements. In September 2021, PG&E filed an application for approval of its Gas Cost Allocation and Rate Design Proposals (“CARD”). The CPUC issued a decision in the GRC in November 2023 authorizing PG&E’s revenue requirements for the four-year rate period of 2023-2026. SMUD is a party to the comprehensive all-party settlement agreement submitted to the CPUC for approval in June 2023 which, if approved, would resolve all open issues in the CARD proceeding. SMUD does not believe that determinations of these CPUC proceedings will have a material adverse effect on SMUD’s financial position, liquidity or results of operations. SMUD will continue to actively participate in PG&E’s GRC and CARD proceedings to ensure that costs are fairly allocated to non-core customers, including electric generator backbone customers.

In the GRC, the CPUC directed PG&E to submit an application to revise its natural gas curtailment procedures “similar to the curtailment procedures of other large energy utilities”. SMUD will actively participate in this future proceeding.

Separately, SMUD continues to participate and monitor a proceeding at the CPUC concerning long-term gas system planning. At this point in these proceedings, SMUD does not anticipate that the ultimate resolution of such cases will have a material adverse effect on SMUD’s financial position, liquidity, or results of operation.

SMUD monitors a number of other CPUC proceedings. These proceedings generally fall into the following categories: (i) filings initiated by PG&E to adopt/modify its tariffs and/or rules; (ii) rulemakings initiated by the CPUC to establish market design and behavior rules or program rules affecting SMUD customers; and (iii) rulemakings initiated by the CPUC to establish electric and/or gas system safety design and maintenance rules. SMUD believes that determinations of these CPUC proceedings will not have a material adverse effect on SMUD’s financial position, liquidity or results of operations.

DEVELOPMENTS IN THE ENERGY SECTOR

California Electric Market

In 1996, the State partially deregulated its electric energy market and the CAISO was established in 1998. Since the CAISO’s formation, the State has experienced episodes of higher and more volatile prices for natural gas and wholesale electricity. In reaction to such conditions, SMUD made significant changes to its business strategy to mitigate the impacts of the more volatile and unpredictable energy markets. Volatility in energy prices in the State are always a potential risk due to a variety of factors which affect both the supply and demand for electricity in the western United States. These factors include, but are not limited to, the implementation of the CAISO market design changes, insufficient generation resources, the increase in intermittent renewable energy resources, natural gas price volatility, fuel costs and availability, weather and natural disasters, transmission constraints and levels of hydroelectric generation within the region. While SMUD has taken a number of steps to mitigate its exposure to price volatility associated with these factors, this price volatility under extreme conditions may contribute to greater volatility in SMUD’s net revenues from the purchase and sale of electric energy and, therefore, could materially adversely affect the financial condition and liquidity of SMUD. For a discussion of SMUD’s current resource planning activities and risk management strategies, see “BUSINESS STRATEGY” above.

Cybersecurity

Cybersecurity continues to be a top priority for SMUD. Attacks or threats directed at critical electric or energy sector operations could damage or cause the shut-down of generation, transmission or distribution assets that are essential to SMUD's ability to serve its customers, cause operational malfunctions and outages affecting SMUD's electric system, and result in costly recovery and remediation efforts. The costs of security measures or of remedying breaches could be material.

SMUD participates in sharing and receiving information about cyber security threats in real-time through the Electricity Information Sharing and Analysis Center ("E-ISAC"), the central hub for such data to actively manage risk related to potential cyber intrusion. SMUD also participates in NERC's development of mandatory, enforceable cyber security standards to address vulnerabilities in electric utility systems. SMUD also adopts voluntary measures suggested as best practices by the National Institute of Standards and Technology ("NIST") in its national framework.

SMUD's prudent response to this ever-changing threat requires constant monitoring and frequent updates to implement new regulatory requirements as they are developed. SMUD manages risk related to frequently changing regulatory requirements by participating in the development of standards at NERC and NIST and through active engagement in the cyber security policy dialogue in Congress.

Physical Security

Physical security is a critical concern for electric utilities as they seek to protect their infrastructure from a range of threats. The electric utility infrastructure is complex and consists of multiple components, such as power plants, substations, transmission and distribution lines, and other facilities. SMUD employs a dedicated physical security team that is deployed 24/7 and allows SMUD to respond to emergent events in a safe, coordinated, efficient, and cohesive manner, protecting the lives of its employees, customers, community, properties and assets. SMUD has policies, processes and procedures in place that outline the access controls and restrictions for its properties. SMUD restricts access based on need as it determines, while adhering to applicable laws, regulations and standards such as NERC Reliability Standards and NRC regulations. SMUD also maintains a Utility Security Plan adopted by the Board representing SMUD's compliance with the CPUC's Safety and Enforcement Division six-step security plan process described in CPUC Decision 19-01-018.

During times of elevated, imminent threats, safety and/or security concerns, SMUD's Security Operations team, under the direction of the Chief Financial Officer or delegate, reserves the right to deploy additional security measures, controls, and further restrict or limit access to its properties to increase its security posture.

SMUD operates a 24/7 security operations center which monitors and coordinates responses to situations reported by internal and external stakeholders, or which are detected by SMUD's security technology. The technology includes access control, video surveillance, and various types of intrusion detection solutions. The security operations center is a central hub for initial contact for physical security calls from employees of suspicious events and initiates incident responses as needed.

Federal Legislation and Regulatory Proceedings

Energy Policy Act of 2005. On August 8, 2005, the Energy Policy Act of 2005 (the "EPAct of 2005") was signed into law. The law includes a number of energy-related provisions, including among other things limited FERC jurisdiction over interstate transmission assets of municipal utilities, cooperatives and federal utilities to order these entities to provide transmission services on rates and terms

comparable to those the entities charge and provide to themselves; the grant of authority to FERC to establish and certify an electric reliability organization to develop and enforce reliability standards for users of the bulk power transmission system; and prohibitions of certain market practices including the provision of false information and related expansion of FERC civil and criminal penalty authority. So far, the most visible impact of the EAct of 2005 on SMUD has been the development of mandatory federal reliability standards.

Federal Regulation of Transmission Access. The Energy Policy Act of 1992 (the “Energy Policy Act”) made fundamental changes in the federal regulation of the electric utility industry, particularly in the area of transmission access. The Energy Policy Act provided FERC with the authority to require a transmitting utility to provide transmission services at rates, charges, terms and conditions set by FERC. The purpose of these changes, in part, was to bring about increased competition in the electric utility industry. Under the Energy Policy Act, electric utilities owned by municipalities and other public agencies which own or operate electric power transmission facilities which are used for the sale of electric energy at wholesale are “transmitting utilities” subject to the requirements of the Energy Policy Act.

Since the Energy Policy Act, FERC has adopted a series of rules to implement competitive open access to transmission facilities and regional transmission planning. Order No. 888, issued in 1996, requires the provision of open access transmission services on a nondiscriminatory basis by all “jurisdictional utilities” (which, by definition, does not include municipal entities like SMUD) by requiring all such utilities to file OATTs. Order No. 888 also requires “nonjurisdictional utilities” (which, by definition, does include SMUD) that purchase transmission services from a jurisdictional utility under an open access tariff and that owns or controls transmission facilities to provide open access service to the jurisdictional utility under terms that are comparable to the service that the nonjurisdictional utility provides itself. Section 211A of the EAct of 2005 authorizes, but does not require, FERC to order unregulated transmission utilities to provide transmission services, including rates and terms and conditions, that are comparable to those under which the unregulated transmitting utility provides transmission services to itself that are not unduly discriminatory or preferential – often referred to as the reciprocity rule.

In Order 890, issued in 2007, FERC stated that it will implement its authority under Section 211A on a case-by-case basis and retain the current reciprocity provisions.

In 2011, FERC issued Order 1000, which among other things requires public utility (jurisdictional) transmission providers to participate in a regional transmission planning process that produces a regional transmission plan and that incorporates a regional and inter-regional cost allocation methodology. Similar to Order 890, FERC states that it will implement its authority under Section 211A on a case-by-case basis. However, in Order 1000, FERC appears to expand upon the current reciprocity provisions and states that it has the authority to allocate costs to beneficiaries of services provided by specific transmission facilities even in the absence of a contractual relationship between the owner of the transmission facilities and the identified beneficiary.

SMUD, individually, and through the Large Public Power Council (“LPPC”), appealed Order 1000, but in 2014 the D.C. Circuit Court of Appeals rejected all of the arguments raised on appeal, upholding the entirety of Order 1000.

The jurisdictional members of WestConnect filed their proposed regional planning process and cost allocation methodology through a series of compliance filings at FERC. FERC accepted binding cost allocation for jurisdictional transmission providers of WestConnect and mandated that non-jurisdictional transmission providers (such as SMUD) identified as beneficiaries of a project have the ability to not accept the cost allocation. WestConnect’s Order 1000 planning process began with the 2016-2017 planning cycle.

However, in response to FERC’s WestConnect orders on compliance, El Paso Electric Company (“El Paso”), a jurisdictional transmission provider, petitioned to the Court of Appeals for the 5th Circuit. El Paso contends that FERC’s WestConnect orders violate Order 1000’s cost causation principle because WestConnect’s binding cost allocation applies only to the jurisdictional transmission providers and thus forces jurisdictional transmission providers to subsidize projects benefitting non-jurisdictional transmission providers that opt-out of projects. The non-jurisdictional transmission providers agreed on a settlement with the jurisdictional transmission providers to resolve the matters on appeal in the 5th Circuit, but FERC ultimately did not accept the settlement. On August 2, 2023, the court reversed FERC’s orders implementing Order No. 1000 for WestConnect concerning cost allocation of regional transmission projects to non-jurisdictional transmission providers. The court found that the WestConnect orders are incompatible with Order No. 1000’s application of the cost causation principle to address free ridership. There is uncertainty at this time on the future of WestConnect’s regional planning process. FERC has not yet acted on its own in light of the Fifth Circuit’s decision, and it is uncertain whether it will act while it is working on an updated transmission planning and cost allocation proposal that would change the Order 1000 process (as further discussed below regarding the April 21, 2022 Notice of Proposed Rulemaking). It is also uncertain if and/or the extent to which the jurisdictional transmission providers in WestConnect will file revisions to the regional transmission planning provisions in their OATTs. In the meantime, the WestConnect planning has continued under the existing framework and SMUD, along with the other non-jurisdictional transmission providers, continue to participate in the WestConnect process. SMUD’s long-standing objective is to comply with open access requirements necessary to achieve reciprocity, including through participation in a regional planning process while not binding itself to mandatory cost allocation. Thus, SMUD has an interest in continuing to explore options for participation in a regional transmission planning process if the WestConnect rules no longer permit SMUD to reasonably participate consistent with its business and jurisdictional interests.

SMUD is unable to predict at this time the full impact that Order 1000, or the 5th Circuit’s August decision, will have on the operations and finances of SMUD’s electric system or the WestConnect region generally. However, WestConnect has conducted multiple planning cycles under its Order 1000 planning process and has not identified any project eligible for cost allocation. SMUD will continue to take any action necessary, including withdrawing from a cost allocation determination or planning region, and engaging in FERC proceedings, to ensure that it is not required to pay for transmission costs in the absence of an agreement or service relationship.

On April 21, 2022, FERC issued a Notice of Proposed Rulemaking on Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection (the “NOPR”). The NOPR seeks input on proposals that would impact the Order 1000 planning and cost allocation process. SMUD has been engaged in the proceeding, providing input and helping draft comments with trade organizations, including LPPC. FERC has not issued any subsequent order. SMUD will continue to monitor and be engaged in any developments at FERC that impact the Order 1000 process and its regional transmission planning participation.

NERC Reliability Standards. The EPAct of 2005 required FERC to certify an electric reliability organization (“ERO”) to develop mandatory and enforceable reliability standards, subject to FERC review and approval. On February 3, 2006, FERC issued Order 672, which certified NERC as the ERO. Many reliability standards have since been approved by FERC, including those aimed at protecting the bulk electric system from physical and cyber threats.

The ERO or the regional entities, such as WECC, may enforce the reliability standards, subject to FERC oversight or FERC may independently enforce reliability standards. Potential monetary sanctions include fines of up to \$1,544,521 per violation per day. Order 693 provides ERO and regional entities with

the discretion necessary to assess penalties for such violations, while also having discretion to calculate a penalty without collecting the penalty if circumstances warrant.

Anti-Market Manipulation Rules. EPCRA of 2005 gave FERC the authority to issue rules to prevent market manipulation in jurisdictional wholesale power and gas markets, and in jurisdictional transmission and transportation services. These anti-market manipulation rules apply to non-jurisdictional entities such as SMUD. Further, EPCRA of 2005 provided FERC civil penalty authority, which the Commission has stated that it will exercise carefully by assuring that its market manipulation rules are clear.

Greenhouse Gas Emissions. Since 2009, the United States Environmental Protection Agency (the “EPA”) has taken steps to regulate GHG emissions from different sources, including from the electric sector.

In 2014, EPA issued a proposed rule under section 111(d) of the Clean Air Act (“CAA”) called the Clean Power Plan (the “CPP”) that projected power sector emissions reductions of 30% below 2005 levels by 2030. The proposed CPP would have established a rate-based emissions goal for each state, providing states the responsibility to develop a State Implementation Plan (“SIP”) describing how each will meet the goal assigned by EPA using the “Best System of Emissions Reduction” (“BSER”) established by EPA. The rule was finalized in October 2015.

In November 2015, 27 states and numerous corporations challenged the CPP in court, alleging that EPA had exceeded its authority under the CAA; however, before the issue could be decided by the court, the 2016 presidential election resulted in a change of administration. The new administration quickly moved for an abeyance (or stay) of the case for as long as the agency needed to review and withdraw the CPP. The U.S. Supreme Court stayed implementation of the CPP pending disposition in the D.C. Circuit and any subsequent review by the Supreme Court. In August 2018, EPA proceeded to withdraw the CPP and the D.C. Circuit ultimately dismissed the case on September 17, 2019. EPA proposed a different rule under the same provision of the CAA, known as the Affordable Clean Energy (“ACE”) rule, which would have established a BSER that only includes measures that can be undertaken at an individual power plant, rather than the broader suite of measures envisioned under the CPP. The ACE rule was challenged in court by environmental groups and states alleging that the revised rule inadequately responds to EPA’s responsibility to protect public health and welfare. SMUD joined in this litigation along with other challengers. The D.C. Circuit vacated the ACE rule on January 19, 2021, and remanded it to the EPA for review and revision, just days before a new presidential administration took office. Several states led by West Virginia and coal industry members appealed the decision.

In June 2022, the U.S. Supreme Court issued its opinion in *West Virginia v. EPA*, striking down the CPP and foreclosing any future regulations of “significant political and economic significance” if Congress has not expressly authorized them. While the decision does not restrict EPA to only requiring measures “inside the fence line” at an individual power plant to control GHGs, it appears unlikely that the EPA will be able to require material reductions in GHGs to mitigate climate change through section 111(d) of the CAA.

Under the new presidential administration, in May 2023, the EPA issued a proposed rule under Section 111(d) of the CAA to reduce GHG emissions from existing and new power plants. The four-part proposed rule, *New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule*, would set forth GHG emission standards for certain subcategories of new and existing fossil fuel-fired power plants operating greater than 50% of the time and generating more than 300 MW per turbine. In the proposed rule, EPA determined the BSER is either deploying carbon capture and storage

technology to capture 90% of emissions or co-firing 96% hydrogen produced through a low-emission process (“low-GHG hydrogen”). If finalized, compliance is required by 2032. SMUD has filed comments as part of several trade groups and coalitions in response to the proposed rule. SMUD’s internal analysis shows the rule as proposed would not require changes at any of its currently-operating fossil-fueled power plants and therefore will not have a material impact on SMUD’s financial position, operations, or liquidity.

Federal Communications Commission

The 1978 Pole Attachment Act added section 224 to the Communications Act of 1934, authorizing the Federal Communications Commission (“FCC”) to regulate attachments by cable television systems or providers of telecommunications service to utility poles, ducts, conduits, and rights-of-way. Under Section 224(a)(1), public power entities are exempt from FCC pole attachment regulations, as municipally-owned poles are already subject to local decision-making processes and governance. The municipal exemption from FCC pole attachment regulations was further codified through the enactment of the Telecommunications Act of 1996. However, over the past decade, this exemption has been continuously eroded.

Various actions by the FCC have limited the exemption in support of a “uniform policy for broadband access to privately-owned physical infrastructure.” Through four orders issued between 2017 and 2018, the FCC set strict time limits for the review of pole attachment applications and preempted state and local agreements on pole attachments. In 2020, in *City of Portland v United States*, the U.S. Court of Appeals for the Ninth Circuit upheld the FCC’s Small Cell Order, which adopted new time limits for municipal utilities’ review of wireless infrastructure siting applications and preempted access fees for small cells. In November 2023, the FCC adopted its Fourth Report and Order, Declaratory Ruling, and Third Further Notice of Proposed Rulemaking that would reform pole replacement rules and facilitate the approval process for pole attachment applications, among other things. SMUD will monitor this proceeding for any potential impact to SMUD.

SMUD is unable to predict whether any new FCC rulemakings will impact the operations and finances of SMUD’s electric system.

Federal Clean Energy Legislation. SMUD actively participates in discussion at the federal level regarding legislation that would meaningfully impact SMUD’s existing GHG reduction strategies or impose new requirements for electric generators, including a proposed federal clean energy standard. In the 117th Congress, a clean electricity performance program was considered but ultimately lacked support to pass. Instead, Congress extended and expanded clean energy tax credits and created new grant and rebate programs to incentivize clean energy investments in the Inflation Reduction Act of 2022. While it is possible that a future Congress may revisit the concept of a clean energy standard or other GHG reduction regime, it is possible that the passage of the Inflation Reduction Act will diminish the likelihood of a new regulatory framework being enacted in the near future.

SMUD is unable to predict whether any new EPA rulemakings will be undertaken, and what the full impact of the reduction of fossil-based generation over time will have on the operations and finances of SMUD’s electric system or the electric utility industry generally.

State Legislation and Regulatory Proceedings

A number of bills affecting the electric utility industry have been enacted by the State Legislature. In general, these bills provide for reduced GHG emission standards and greater investment in energy efficient and environmentally friendly generation alternatives through more stringent RPS. Additionally, ongoing regulatory proceedings address the implementation of these bills as well as water flow and quality

issues related to the Sacramento – San Joaquin River Delta. The following is a brief summary of these bills and regulatory proceedings.

Greenhouse Gas Emissions. On September 27, 2006, the Governor of the State signed into law AB 32, the Global Warming Solutions Act of 2006 (“AB 32”). AB 32 requires the California Air Resources Board (“CARB”) to adopt enforceable GHG emission limits and emission reduction measures in order to reduce GHG emissions to 1990 levels by 2020. In addition, AB 32 establishes a mandatory reporting program for all IOUs, local, publicly-owned electric utilities and other load-serving entities (electric utilities providing energy to end-use customers) (“LSEs”). The AB 32 reporting program allows CARB to adopt regulations using market-based compliance mechanisms such as a “cap-and-trade” system.

On December 16, 2010, CARB approved a resolution adopting cap-and-trade regulations for the State. The regulations became effective on January 1, 2012. As adopted, the cap-and-trade program covers sources accounting for 85% of the State’s GHG emissions, the largest program of its type in the United States. In November of 2012, CARB conducted its first allowance auction and auctions now occur on a quarterly schedule.

The cap-and-trade program introduced a hard emissions cap that declines over time on the combined electric utility and large industrial sectors, covering all sources emitting more than 25,000 metric tons of carbon dioxide-equivalent greenhouse gases (“CO₂e”) per year, and was subsequently expanded to cover distributors of transportation, natural gas, and other fossil fuels. The cap-and-trade program requires covered entities to retire compliance instruments (allowances and carbon offsets) for each metric ton of CO₂e they emit. CARB has allocated free allowances to LSEs to mitigate the compliance cost burden on ratepayers. The value of allowances must be used to benefit ratepayers and achieve GHG emission reductions. The cap-and-trade program also allows covered entities to use offset credits for compliance purposes (not exceeding 8% of a regulated entity’s compliance obligation through 2020, 4% from 2021 through 2025, and 6% from 2026 through 2030). Offsets must be obtained from certified projects in sectors that are not regulated under the cap-and-trade program and are subject to other restrictions.

The State's cap-and-trade program was briefly linked to companion program in the Canadian province of Ontario during 2018 but was de-linked following a political change. In 2021, the Washington state legislature passed a cap-and-trade bill, which is expected to interact with the State’s markets. Future potential near-term links to the CARB cap-and-trade program also include the states of Oregon, which has adopted a cap-and-trade program, and New Mexico, which is considering the adoption of a cap-and-trade program.

On October 7, 2015, SB 350 was enacted, containing aggressive goals for reducing carbon emissions by 2030, including raising the proportion of renewable energy to 50%, reducing the use of petroleum fuel in cars and trucks by up to 50%, and doubling the energy efficiency of existing buildings. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*” for additional information. In addition, SB 350 established requirements for larger POUs to adopt and file with the CEC Integrated Resource Plans (“IRPs”) by April 2019 that would show planned procurement to achieve the 50% RPS and State GHG goals established by CARB. The CEC developed “guidelines” for these IRPs for POUs in 2017, updated them in 2018, and proposed additional updates in 2022. CARB established specific GHG target ranges for these IRPs in summer 2018, which were revised in 2023 following the adoption of CARB’s 2022 Scoping Plan. SMUD developed and adopted an IRP in 2018 through a comprehensive public process and filed the adopted IRP with the CEC in April 2019. SMUD adopted an updated IRP in June 2022 and filed the updated IRP with the CEC in September 2022, but the CEC has not yet completed its review of SMUD’s 2022 IRP. SMUD’s updated IRP plans for a greater than 92% reduction in GHG emissions by 2030 relative to 1990 levels, which equals approximately

250,000 metric tons of GHG emissions in 2030. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*.”

On April 29, 2015, the Governor of the State signed Executive Order B-30-15, establishing a goal for the State to reduce GHG emissions to 40% below 1990 levels by 2030. In 2016, the State Legislature passed Senate Bill 32 (“SB 32”), which codified then-Governor Brown’s goal of reducing the State’s GHG emissions to 40% below 1990 levels by 2030. In 2017, the State Legislature passed Assembly Bill 398 (“AB 398”), explicitly authorizing the continuation of the cap-and-trade program, with designated changes, through 2030. Subsequently, CARB adopted an initial set of regulatory changes extending the cap-and-trade program, including establishing utility sector allowance allocations through 2030. In 2018, CARB completed a rulemaking to implement the cap-and-trade program changes designated by AB 398. These changes include development of a hard price ceiling for the cap-and-trade program and two price-containment points below that ceiling, in an attempt to ensure stable prices in the program. CARB adopted final regulations on December 13, 2018.

In addition, any new projects constructed in the State, including power plants, that may cause a significant adverse impact on the environment must be analyzed under CEQA. Some State agencies have begun using CEQA in novel ways to require mitigation of “significant” GHG emissions caused, either directly or indirectly, by a project. Pursuant to Senate Bill 97 passed in 2007, CARB will assist the Governor’s Office of Planning and Research in setting thresholds of significance under CEQA of GHG impacts from new projects. This is an area of State law that is evolving and untested in the courts. However, there is a risk that any project proponent of an electric system infrastructure project might have to mitigate such potential impacts to a level of less than significant.

On December 3, 2012, the Superior Court issued a ruling in *Cleveland National Forest Foundation v. San Diego Association of Governments* (“SANDAG”), Case No. 2100-00101593, that sided with the State Attorney General and the other petitioners stating that SANDAG did not follow CEQA when it adopted a \$257 billion regional transportation plan in 2011. The ruling expressly invalidated the certification of the Environmental Impact Report (“EIR”) on the grounds that the EIR should have analyzed the plan’s consistency with the governor’s policy goal to reduce GHG emissions by 80% by 2050 as articulated in the 2005 Executive Order S-03-05. On November 24, 2014, the Fourth Appellate District upheld the trial court in a published decision, and SANDAG appealed to the State Supreme Court. On July 13, 2017, the Supreme Court reversed and held that SANDAG’s decision not to adopt the 2050 goal was not an abuse of discretion. Nevertheless, the Court articulated three clear principles for agencies to follow in their CEQA review of planning documents: 1) agencies must take seriously the significance of even small increases in GHG emissions; 2) they must consider science-based State policy guidance in their decision-making; and 3) they are required to use the best scientific information available to determine whether their planning decisions are consistent with the State’s goals. These principles will apply to SMUD in CEQA reviews of future projects.

On September 29, 2006, the Governor of the State signed into law Senate Bill 1368 (“SB 1368”), the GHG Emissions Performance Standard (“EPS”). SB 1368 limits long-term investments in baseload generation by the State’s utilities to power plants that meet an EPS jointly established by the CEC and the CPUC. The agencies have set the EPS at 1,100 pounds CO₂ per MWh, which is roughly half of the CO₂ emissions rate of a conventional coal-fired power plant. CEC regulations to implement the law for POU’s were approved by the Office of Administrative Law on October 16, 2007.

SMUD’s primary supply and demand-side resources need to meet customers’ electricity usage patterns over the next 10 years. Currently there is a ban in the State that prohibits the development of nuclear power plants until there is a permanent storage solution for spent fuel rods. With the effective ban on new coal power imports under SB 1368, natural gas-fired, combined cycle power plants would appear

to be the primary viable option for fossil fuel-based baseload power plant development absent the implementation of new technologies in connection with other resource options. The reliance on a single fuel source will continue to put pressure on the natural gas market in the United States. SMUD has in place a natural gas procurement plan to mitigate natural gas volatility, see “POWER SUPPLY AND TRANSMISSION – Fuel Supply” above.

On September 16, 2022, the Governor of the State signed into law SB 1020, which creates interim climate targets under which eligible renewable energy resources and zero-carbon resources must supply 90% of all retail sales of electricity to California end-use customers by December 31, 2035, and 95% by December 31, 2040. The bill also requires each State agency to ensure that zero carbon resources and eligible renewable energy resources supply 100% of electricity procured on its behalf by December 31, 2035. SMUD provides electricity to a number of State agency buildings and will work with State agencies to comply with this requirement.

On October 7, 2023, the Governor of the State signed into law AB 1305, which requires an entity that purchases or uses voluntary carbon offsets and makes claims regarding the achievement of net zero, or other similar claims, to disclose on their website specified information. Many stakeholder groups are raising questions on if this includes RECs. Clean-up legislation could follow. It is not clear at this time whether RECs are included.

Reliability. On June 30, 2022, the Governor signed the 2022-23 budget, along with a number of trailer bills, which provide implementing details on the budget line items. Included in AB 205, the energy trailer bill, are a number of reliability programs.

1. CEC Distributed Electricity Backup Assets Program to incentivize the construction of cleaner and more efficient distributed energy assets that would serve as on-call emergency supply or load reduction for the state’s electrical grid during extreme events. The CEC adopted program guidelines in October 2023 and issued the first solicitation in December 2023.
2. CEC Demand Side Grid Support Program to pay customers to reduce demand during stressed grid events. SMUD has actively engaged the CEC on the development and subsequent revision of program guidelines. The CEC is expected to revise the guidelines again for summer 2024.
3. DWR Strategic Reliability Reserve to secure resources for summer reliability or to preserve the option to extend the life of facilities that otherwise would retire, new temporary generators of more than five MW, new energy storage systems of at least 20 MW, generation facilities that use clean, zero-emission fuel technologies, or new zero-emission technologies that can be operational by December 31, 2026.

As a follow up to this legislation, the Governor signed into law AB 1373. The bill authorizes the CEC to annually assess a capacity payment on a POU within the CAISO balancing authority area during a month in which the POU fails to meet its minimum planning reserve margin. This does not include SMUD, who is within the BANC balancing authority area. SMUD is, however, required to submit to the CEC an assessment of whether it exceeded, met, or failed to meet its minimum planning reserve margin and system resource adequacy requirements. This bill also allows the DWR, for certain types of long-development projects, to act as a central procurement entity. For POUs, participation in the DWR program would be optional.

Zero-Emission Fleet Mandates. CARB has adopted the Advanced Clean Fleets (“ACF”) regulation, requiring certain medium- and heavy-duty (“MHD”) vehicle fleets to transition to zero-emission vehicles through purchase requirements or fleet composition requirements, which took effect on November

1, 2023, and applies to all publicly owned MHD fleets, larger commercially owned MHD fleets, and drayage trucks. Under the ACF Rule, public fleets like SMUD have two compliance options. The first is a zero-emission vehicle (“ZEV”) purchase requirement, under which 50% of annual MHD vehicle purchases would need to be ZEVs starting January 1, 2024, and 100% of annual MHD vehicle purchases would need to be ZEVs starting January 1, 2027. The second is an optional ZEV milestone option, under which the composition of the MHD fleet would need to meet certain ZEV percentages starting in 2025, with the entire fleet transitioned no later than 2042. The individual milestones depend on the number and category of vehicles in the fleet. Public fleets may opt into the ZEV milestone option until January 1, 2030. In 2024, SMUD plans to comply with the purchase requirement option, meaning that 50% of the MHD vehicles SMUD purchases in 2024 will be ZEVs. SMUD plans to monitor ZEV market developments and currently expects to opt into the ZEV milestone option as more ZEVs become available. The ACF Rule also accelerates a manufacturer ZEV sales requirement to 100% of all MHD truck sales by the 2036 model year.

CARB proposed the Zero-Emission Forklift regulation in November 2023. The regulation would require forklift fleets to transition spark-ignited forklifts to zero-emission technology starting in 2026. The regulation would apply to SMUD, as a forklift operator. Since SMUD has a limited number for forklifts, this regulation is not expected to have a material effect on SMUD’s financial position, liquidity, or results of operation.

Transportation and Building Electrification. In recent years, the State has identified transportation and building electrification as key strategies to reduce greenhouse gas emissions and improve air quality, and is advancing policy to support or accelerate electrification. For example, in addition to the zero-emission fleet mandates and LCFS regulation discussed herein, CARB adopted the Advanced Clean Cars II and Advanced Clean Trucks regulations to require vehicle manufacturers to increase sales of zero-emission cars and trucks, respectively. The CEC’s Building Energy Efficiency Standards are increasingly encouraging the use of electric heat pumps in new homes and certain non-residential buildings across the state. The draft 2025 Energy Standards, which are expected to be proposed by April 2024 and adopted by August 2024, would establish prescriptive heat pump requirements for both space and water heating in new homes, and may require existing homes to install a heat pump when replacing an air conditioner. The 2025 Energy Standards, if approved, would take effect on January 1, 2025. In addition, the State has also provided funding for programs to encourage clean transportation and building electrification.

Increases in transportation and building electrification will result in increased customer usage of electricity.

Renewables Portfolio Standard. Senate Bill 100 was passed by the Legislature and approved by Governor Brown on September 10, 2018. Among other requirements, the bill sets a 50% RPS target for 2026 and sets compliance period targets at 44% by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. The bill also creates a statewide planning goal to meet all of the state’s retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045.

Sacramento-San Joaquin River Bay-Delta Processes. The Sacramento-San Joaquin River Delta is an expansive inland estuary, formed at the western edge of the California Central Valley by the confluence of the Sacramento and San Joaquin rivers (“Delta”). There are two substantial Delta planning processes with the potential to affect (1) energy available for SMUD’s purchase from the Central Valley Project (“CVP”) and (2) flows within the Upper American River watershed. These processes are called the Bay-Delta Water Quality Control Plan (“Bay-Delta Plan”) and the Delta Conveyance Project.

The Bay-Delta Water Quality Control Plan is updated periodically by the State Water Resources Control Board (“SWRCB”), the last time being in 2006. The current Bay-Delta Plan update process is being implemented in four phases. The first phase considered southern Delta water quality, with a

significant focus on San Joaquin River tributaries. Phase 2, which is initially being addressed by a document under development by SWRCB staff, will address Sacramento River tributaries and various flow related issues, including the critically important one of those tributaries' contribution to Delta outflow. Phase 3 will concern changes to water rights needed to implement Phase 2. A substantial change in Delta outflow requirements could have a major impact on the timing of hydroelectric energy generation by the CVP. SMUD has a long-term agreement with WAPA to purchase some of this power (see "POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – *Western Area Power Administration*"). On July 18, 2018, the SWRCB released an updated Framework document signaling its staff's intent to propose Delta outflow requirements of 45–65% unimpaired flows for the Sacramento River tributaries (which includes the American River, the upper portions of which are where the UARP sits), though the report will analyze requirements of 35–75%. If these criteria were implemented, they could cut CVP generation by 50 to 63%. Governor Newsom has urged the SWRCB, other agencies and affected parties to execute voluntary agreements (aka the "Healthy Rivers Agreements") to address species' needs and outflow requirements. Although the negotiations have been slow, it is expected they will eventually result in a reasonable compromise. However, in September 2023 the SWRB released a Staff Report/Substitute Environmental Document in Support of Potential Updates to the Bay-Delta Plan (the "Staff Report/Substitute Environmental Document") to justify the adoption of the unimpaired flow standard as set forth in the 2018 Framework document. Numerous public entities, including SMUD, filed comments stating that, among other things, the potential updates identified in the Staff Report/Substitute Environmental Document, if adopted, would violate the Porter-Cologne Water Quality Control Act and Article X, section 2 of the California Constitution, would not improve fish and wildlife, and would not reasonably protect all beneficial uses, including water supplies for millions of Californians and hydroelectric power generation that is essential to California's resilient energy grid. Moreover, the comments filed also stated that the Staff Report/Substitute Environmental Document does not comply with CEQA because, among other things, the analysis of the proposed inflow and habitat objectives' impacts on electrical peaking generation, and more generally electrical grid reliability, is not supported by substantial evidence and fails to satisfy informational requirements. In addition, the comments maintain that the Healthy Rivers Agreements are a superior approach to achieving the goal of maximizing both environmental and other beneficial uses. If the unimpaired flow standard is adopted and the Healthy Rivers Agreements do not come to fruition, SMUD plans to fully participate in all regulatory and legal proceedings to argue for consideration and minimization of impacts to hydropower generation. SMUD will assess the potential impacts of proposed modifications to the present outflow objectives on SMUD's operations once, or if, the SWRCB makes available information with enough specificity for SMUD to conduct the relevant modeling.

In July 2022, the DWR released a Draft Environmental Impact Report ("EIR") to evaluate the potential impacts of carrying out the Delta Conveyance Project; the U.S. Army Corps of Engineers released a separate Environmental Impact Statement to evaluate the effects of the project pursuant to the National Environmental Policy Act. The Delta Conveyance Project is expected to entail construction of two intakes on the Sacramento River that will carry water to a main tunnel to the California Aqueduct for delivery south of the Delta. The Delta Conveyance Project may pose the potential to exacerbate impacts to already imperiled aquatic species, and in turn could have indirectly prompted regulatory agencies to require third parties, such as SMUD, to compensate by making changes to their operations. The Bureau of Reclamation is not a party to the Delta Conveyance Project, which should eliminate the potential for CVP power to be used to supply Delta Conveyance Project pumps. SMUD will monitor the proceedings and participate as necessary to ensure any impacts to SMUD interests are minimized, including potentially filing a challenge to the water rights DWR would need to modify in order to carry out the project.

Proposition 26. Proposition 26 was approved by the electorate on November 2, 2010 and amends Article XIII A and Article XIII C of the State Constitution. Proposition 26 imposes a two-thirds voter approval requirement for the imposition of fees and charges by the State, unless the fees and charges are expressly excluded. It also imposes a majority voter approval requirement on local governments with

respect to fees and charges for general purposes, and a two-thirds voter approval requirement with respect to fees and charges for special purposes, unless the fees and charges are expressly excluded. The initiative, according to its supporters, is intended to prevent the circumvention of tax limitations imposed by the voters pursuant to Proposition 13, approved in 1978, and other measures through the use of non-tax fees and charges. Proposition 26 expressly excludes from its scope a charge imposed for a specific local government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable cost to the local government of providing the service or product. Proposition 26 is not retroactive as applied to local governments. Although SMUD believes that the initiative was not intended to apply to fees for utility services such as those charged by SMUD and its fees and charges meet the criteria of the exclusion described above, it is possible that Proposition 26 could be interpreted to further limit fees and charges for electric utility services and/or require stricter standards for the allocation of costs among customer classes. SMUD is unable to predict at this time how Proposition 26 will be interpreted by the courts or what its ultimate impact will be. As of the date of this Official Statement, SMUD is unaware of any fees or charges relating to SMUD's service that would have to be reduced or eliminated because of Proposition 26. However, certain of SMUD's adopted rate increases have been challenged. See "LEGAL PROCEEDINGS – Proposition 26 Lawsuit."

Initiative 1935. A voter initiative entitled "The Taxpayer Protection and Government Accountability Act" ("Initiative 1935") has been determined to be eligible for the State's November 2024 statewide general election and, unless withdrawn by its proponent prior to June 27, 2024, will be certified as qualified for the ballot in such election. Were it to be approved by a majority of voters in the election, Initiative 1935 would amend Article XIII C of the State Constitution to, among other things, provide that charges (or increases in charges) imposed or extended by a local government after January 1, 2022 for services or products provided directly to the payor (including, potentially, fees and charges for electric utility services) are "taxes" subject to voter approval unless the local government can prove by clear and convincing evidence that the charge is reasonable and does not exceed the "actual cost" of providing the service or product. Initiative 1935 defines "actual cost" as "(i) the minimum amount necessary to reimburse the government for the cost of providing the service or the product to the payor and (ii) where the amount charged is not used by the government for any purpose other than reimbursing that cost." Initiative 1935 would also require that local governments impose fees and charges by ordinance (which may be subject to referendum). If adopted, Initiative 1935 would be subject to judicial interpretation. SMUD is unable to predict whether and how Initiative 1935, if approved, would be interpreted or applied, but it is possible any such interpretation or application could further limit future fees and charges or future increases in fees and charges for electric utility services, require stricter standards for the allocation of costs among customer classes and/or otherwise adversely impact SMUD and its revenues. In response to an emergency petition filed by Governor Gavin Newsom, with support from the League of California Cities and others, the California Supreme Court has unanimously agreed to decide whether the initiative should appear on the November 2024 ballot or be disqualified. A ruling is expected before June 30, 2024, which is the deadline for placing items on the November 2024 ballot.

On November 2, 2023, Assembly Constitutional Amendment No. 13 ("ACA 13") was filed with the Secretary of State and will be on the ballot for the November 2024 statewide general election. If approved by voters, ACA 13 would require any initiative constitutional amendment appearing on the ballot on or after January 1, 2024, that would increase the voter approval requirement to adopt any State or local measure to be approved by the highest voter approval requirement that the initiative measure would impose. In other words, if ACA 13 is approved by voters, its express terms appear to require Initiative 1935 to pass with a 2/3 vote, since Initiative 1935 would extend a 2/3 vote requirement to additional State and local fees and charges. If adopted, ACA 13 and its effect on the adoption of Initiative 1935, if applicable, are likely to be subject to judicial interpretation. SMUD is not able to predict whether or how ACA 13, if approved, would be interpreted or applied or whether or how ACA 13, if approved, would affect the adoption, interpretation or application of Initiative 1935, if adopted.

Wildfire Legislation. In response to catastrophic wildfires in California, legislation was adopted and signed into law requiring POU's (including SMUD), IOUs, and electrical cooperatives to construct, maintain and operate their electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by electrical lines and equipment. Senate Bill 247 ("SB 247"), signed by Governor Newsom on October 2, 2019, establishes notification, audit and reporting guidelines for electrical corporations relating to vegetation management requirements in the wildfire mitigation plan. SB 247 also specifies the qualifications for electrical line clearance tree trimmers performing work to comply with the vegetation management requirements in an electrical corporation's wildfire mitigation plan and requires that qualified line clearance tree trimmers be paid no less than a specified prevailing wage rate. POU's are not required to adhere to SB 247, but the market impacts are projected to significantly increase SMUD's annual vegetation management costs.

Nonstock Security. SMUD sponsored legislation in 2019, Assembly Bill 689, which was signed into law by Governor Newsom on September 5, 2019. This bill expressly allows SMUD the ability to operate a pilot project (effective January 1, 2020, to January 1, 2025), of up to three acquisitions, to hold nonstock security in a corporation or other private entity if acquired as part of a procurement of goods or services from that entity, provided that no separate funding is expended solely for the nonstock security. This will allow SMUD to realize the financial benefits of its investments, partnerships, and intellectual property.

On September 15, 2022, the Board authorized the CEO & GM to enter into a joint collaboration agreement with ESS Tech, Inc. ("ESS"). Under that agreement SMUD would procure from ESS iron flow batteries for utility scale long-duration energy storage applications. The agreement contemplates a multi-year phased deployment of up to 200MW/2GWh of long duration energy storage by 2028. As part of that procurement, SMUD acquired nonstock security in ESS.

SMUD will be sponsoring legislation in 2024 to extend the authority granted by Assembly Bill 689 to future years.

Future Regulation

The electric industry is subject to continuing legislative and administrative reform. States and Federal entities routinely consider changes to the way in which they regulate the electric industry. Recently, both further deregulation and forms of additional regulation have been proposed for the industry, which has been highly regulated throughout its history. SMUD is unable to predict at this time the impact any such proposals will have on the operations and finances of SMUD or the electric utility industry generally.

OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY

CAISO Market Initiatives

The CAISO routinely conducts a number of initiatives and stakeholder processes that propose certain operational and market changes that impact SMUD. SMUD does and will continue to monitor the various initiatives proposed by the CAISO and participate in its stakeholder processes to ensure that its interests are protected.

SMUD participates in the CAISO market for only a small percentage of energy needs, however, it continues to benefit from its participation in the CAISO's WEIM and is currently exploring further participation in the CAISO's proposed Extended Day Ahead Market ("EDAM") (both the WEIM and EDAM are described further below). Along with monitoring other key market initiatives at the CAISO which impact wholesale energy markets, SMUD will continue to actively participate in all processes related

to EIM and EDAM, to ensure both participation models are beneficial to SMUD’s customers. Given its success in EIM and active engagement with the CAISO and CAISO leadership, SMUD has earned a key role in the stakeholder processes related to these important and evolving markets.

Resource Adequacy Filing

In September 2005, the State Legislature enacted and the Governor signed into law Assembly Bill 380 (“AB 380”), which requires the CPUC to establish resource adequacy requirements for all LSEs within the CPUC’s jurisdiction. SMUD is not an LSE subject to the CPUC’s jurisdiction. In 2005, the CPUC issued a decision requiring jurisdictional LSEs to demonstrate that they have acquired capacity sufficient to serve their forecast retail customer load plus a minimum 15% planning reserve margin. In June 2022, the CPUC issued a decision increasing the minimum planning reserve margin to 16% for 2023 and 17% for 2024. In June 2023, the CPUC kept the minimum planning reserve margin at 17% for 2024 and extended the 17% requirement for 2025.

AB 380 also required publicly owned utilities, including SMUD, to meet the most recent resource adequacy standard as adopted by the WECC. The WECC has yet to formally adopt a resource adequacy requirement. However, consistent with current WECC practices, SMUD utilizes a minimum 15% planning reserve margin when assessing the need for future resources. For summer 2023, SMUD attained a 17% planning reserve margin and will have at least a 17% planning reserve margin for summer 2024 as well.

In 2022, the State Legislature adopted Assembly Bill 209 (2022) (“AB 209”), which requires the CEC to develop recommendations about approaches to determining an appropriate planning reserve margin for local publicly owned utilities within the CAISO balancing authority area. The CEC has initiated a proceeding and plans to publish a report with a recommended methodology in summer 2024. The report will not directly impact SMUD since SMUD is not in the CAISO; nevertheless, SMUD is monitoring the proceeding. The State Legislature also passed Assembly Bill 1373 (2023) (“AB 1373”) that requires the CEC to submit a report to the Legislature that assesses whether each local publicly owned electric utility in California (both inside and outside the CAISO) exceeded, met, or failed to meet its minimum planning reserve margin for 2023. The report must also assess whether local publicly owned utilities met the planning reserve margin for June through September 2023 established by the CPUC’s June 2022 decision (i.e., 16%). See also “DEVELOPMENTS IN THE ENERGY SECTOR – State Legislation and Regulatory Proceedings – *Reliability*.”

While SMUD believes the CEC’s report will show SMUD met both its 15% planning reserve margin and the CPUC’s 16% planning reserve margin for 2023, SMUD is unable to predict the outcome of the report, or what the Legislature intends to do with the report. To the extent the CEC or Legislature imposes a higher POU planning reserve margin for future years that includes SMUD, the ultimate impacts on SMUD’s financial results and operations are difficult to predict and are dependent on a variety of factors, such as the relative cost of procuring energy/capacity, the availability and relative cost of new technologies, and the adoption and implementation of energy efficiency and other measures by SMUD’s customers; however, such impacts could be material.

Western Energy Imbalance Market and Extended Day Ahead Market

Federal and state policymakers have long-promoted the development of organized markets in the west as a means (among other reasons) to better integrate intermittent renewable resources into the electric system, the first of which markets is the Western EIM, operated by the CAISO. The CAISO successfully launched the WEIM, a real time only imbalance market, on October 1, 2014, with PacifiCorp as the first participant. Since this time, the WEIM has grown significantly with the addition of 21 other Balancing

Authority Areas (including BANC) which together comprise roughly 80% of the load in the Western Interconnection.

To date, participation in the WEIM by SMUD has shown significant financial and operational benefits, in addition to furthering an already favorable working partnership between SMUD and the CAISO to develop solutions to integrate renewable resources in support of carbon reduction goals.

BANC's participation not only signaled the first public power participant in the EIM, but it was also implemented utilizing a unique phased approach, with SMUD (as the largest member of BANC) implementing so-called WEIM Phase 1 in 2019, while the other BANC members and WAPA (the "Phase 2 Parties") joined after further evaluation and approvals in March of 2021.

Part of the BANC Phase 2 participation included reimbursement to SMUD certain upfront infrastructure costs incurred by SMUD in Phase 1 to establish BANC as an WEIM Entity. This reimbursement to SMUD by the Phase 2 Parties has been completed.

The CAISO and WEIM participants, including SMUD and BANC, have participated in developing a design framework to extend the successful WEIM real time framework to the EDAM. Like WEIM, EDAM would broaden the access to regional resources for the reliable integration of renewable resources, only over a longer (day ahead) time horizon by allowing for a more economic and efficient optimization of regional resources by providing grid operators greater time (day ahead as opposed to real time) to commit or decommit units based on market price signals. Only participants in the WEIM will be allowed to extend their participation to EDAM. The CAISO launched a public stakeholder initiative and utilized most of 2022 developing the EDAM design. On February 1, 2023 the CAISO Board of Governors and EIM Governing Body approved the EDAM proposal, with the CAISO filing tariff amendments with FERC on August 22, 2023. FERC unanimously approved most of the filing on December 20, 2023, rejecting without prejudice just one element of the EDAM proposal related to transmission revenue recovery for market participants. The CAISO will work with first movers, PacifiCorp and BANC, and stakeholders in 2024 to refine transmission revenue recovery based on FERC's guidance and begin implementation activities, with the market expected to go-live in the first quarter of 2026. Similar to the process around WEIM participation, SMUD, along with BANC, performed cost-benefit studies that demonstrated EDAM participation will expand on the existing WEIM benefits and in August 2023, SMUD and BANC both approved participation in EDAM with an expectation to on-board in time for the first phase of EDAM participation in 2026.

Other Factors

The electric utility industry in general has been, or in the future may be, affected by a number of other factors which could impact the financial condition and competitiveness of many electric utilities and the level of utilization of generating and transmission facilities. In addition to the factors discussed above, such factors include, among others, (a) effects of compliance with rapidly changing environmental, safety, licensing, regulatory and legislative requirements other than those described above; (b) changes resulting from conservation and demand side management programs on the timing and use of electric energy; (c) changes resulting from a national energy policy; (d) effects of competition from other electric utilities (including increased competition resulting from mergers, acquisitions, and "strategic alliances" of competing electric and natural gas utilities and from competitors transmitting less expensive electricity from much greater distances over an interconnected system) and new methods of, and new facilities for, producing low cost electricity; (e) the repeal of certain federal statutes that would have the effect of increasing the competitiveness of many IOUs; (f) increased competition from independent power producers and marketers, brokers and federal power marketing agencies; (g) "self-generation" or "distributed generation" (such as solar, microturbines and fuel cells) by industrial and commercial customers and others; (h) issues relating to the ability to issue tax exempt obligations, including severe restrictions on the ability

to sell to nongovernmental entities electricity from generation projects and transmission service from transmission line projects financed with tax exempt obligations; (i) effects of inflation on the operating and maintenance costs of an electric utility and its facilities; (j) changes from projected future load requirements; (k) increases in costs and uncertain availability of capital; (l) issues relating to supply chains and the uncertain availability or increased costs of necessary materials; (m) shifts in the availability and relative costs of different fuels (including the cost of natural gas); (n) sudden and dramatic increases in the price of energy purchased on the open market that may occur in times of high peak demand in an area of the country experiencing such high peak demand, such as has occurred in the State; (o) issues relating to risk management procedures and practices with respect to, among other things, the purchase and sale of natural gas, energy and transmission capacity; (p) other legislative changes, voter initiatives, referenda and statewide propositions; (q) effects of changes in the economy; (r) effects of possible manipulation of the electric markets; (s) natural disasters or other physical calamities, including, but not limited to, earthquakes, droughts, severe weather, wildfires and floods; (t) changes to the climate, including increasing volatility in rainfall in the Western United States and a reduction in the depth and duration of the Sierra snowpack; (u) issues relating to cyber-security; and (v) outbreaks of infectious diseases or the occurrence of pandemics. Any of these factors (as well as other factors) could have an adverse effect on the financial condition of any given electric utility, including SMUD's electric utility, and likely will affect individual utilities in different ways.

SMUD is unable to predict what impact such factors will have on the business operations and financial condition of SMUD's electric system, but the impact could be significant. SMUD has taken major steps to mitigate the impacts of many of the changes. This Official Statement includes a brief discussion of certain of these factors. This discussion does not purport to be comprehensive or definitive, and these matters are subject to change subsequent to the date hereof. Extensive information on the electric utility industry is available from the legislative and regulatory bodies and other sources in the public domain, and potential purchasers of any of SMUD's Senior Bonds or Subordinated Bonds described in the forepart of this Official Statement should obtain and review such information.

APPENDIX B

**2023 AND 2022 CONSOLIDATED FINANCIAL STATEMENTS
AND REPORT OF INDEPENDENT ACCOUNTANTS**

APPENDIX C

BOOK-ENTRY SYSTEM

The information in this Appendix regarding DTC has been provided by DTC, and SMUD takes no responsibility for the accuracy or completeness thereof. SMUD cannot and does not give any assurances that DTC, DTC Participants or Indirect Participants will distribute the Beneficial Owners either (a) payments of interest or principal with respect to the 2024 Series M Bonds or (b) certificates representing ownership interest in or other confirmation of ownership interest in the 2024 Series M Bonds, or that they will so do on a timely basis or that DTC, DTC Participants or DTC Indirect Participants will act in the manner described in this Official Statement.

The Depository Trust Company (“DTC”) New York, NY, will act as securities depository for the 2024 Series M Bonds. The 2024 Series M Bonds will be issued as fully registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully registered Bond certificate will be issued for each maturity of the 2024 Series M Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, as amended. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues and money market instruments from over 100 countries that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others, such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a Standard & Poor’s rating of AA+. The DTC rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of the 2024 Series M Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2024 Series M Bonds on DTC’s records. The ownership interest of each actual purchaser of each 2024 Series M Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2024 Series M Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their beneficial ownership interests in the 2024 Series M Bonds, except in the event that use of the book-entry system for the 2024 Series M Bonds is discontinued.

To facilitate subsequent transfers, all 2024 Series M Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. or such other name as may be requested by an authorized representative of DTC. The deposit of the 2024 Series M Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2024 Series M Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 2024 Series M Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the 2024 Series M Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2024 Series M Bonds, such as redemptions, tenders, defaults, and proposed amendments to the bond documents. For example, Beneficial Owners of the 2024 Series M Bonds may wish to ascertain that the nominee holding the 2024 Series M Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners.

Redemption notices shall be sent to DTC. If less than all of a maturity of the 2024 Series M Bonds is being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in the 2024 Series M Bonds of such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the 2024 Series M Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to SMUD as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the 2024 Series M Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal, premium, redemption proceeds and interest payments on the 2024 Series M Bonds will be made to Cede & Co. or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts, upon DTC's receipt of funds and corresponding detail information from SMUD or the Trustee, on a payment date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participants and not of DTC, its nominee, the Trustee or SMUD, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, premium, redemption proceeds and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Trustee. Disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of the Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the 2024 Series M Bonds at any time by giving reasonable notice to SMUD or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, bond certificates are required to be printed and delivered.

SMUD may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, bond certificates for such 2024 Series M Bonds will be printed and delivered to DTC.

Neither SMUD or the Trustee will have any responsibility or obligation to Participants, to Indirect Participants or to any Beneficial Owner with respect to (i) the accuracy of any records maintained by DTC, any Participant, or any Indirect Participant; (ii) the payment by DTC or any Participant or Indirect Participant of any amount with respect to the principal of or premium, if any, or interest on the 2024 Series M Bonds; (iii) any notice which is permitted or required to be given to Holders under the Resolution; (iv) the selection by DTC, any Participant or any Indirect Participant of any person to receive payment in the event of a partial redemption of 2024 Series M Bonds; (v) any consent given or other action taken by DTC as Bondholder; or (vi) any other procedures or obligations of DTC, Participants or Indirect Participants under the book-entry system.

APPENDIX D

SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION

The following is a summary of certain provisions of the Resolution. Other provisions of the Resolution are described under the captions “THE 2024 SERIES M BONDS” and “SECURITY FOR THE BONDS.” This summary is not to be considered a full statement of the terms of the Resolution and accordingly is qualified by reference thereto and is subject to the full text thereof. Capitalized terms not otherwise defined in this Official Statement shall have the meanings ascribed thereto in the Resolution.

Between July 1997 and August 2003, SMUD received consents to amend the Resolution from the owners of the requisite percentage of Outstanding Bonds. Pursuant to the authority granted by such consents, SMUD amended the Resolution in October 2003 by adopting the Forty-Eighth Supplemental Resolution and the Forty-Ninth Supplemental Resolution. The following summary of the Resolution reflects such amendments.

The purchasers of the 2024 Series M Bonds, by virtue of their purchase of the 2024 Series M Bonds, will consent to certain amendments to the Resolution (the “Proposed Amendments”). Such amendments are described in *bold italic* font in the forepart of this Official Statement under “SECURITY FOR THE BONDS – Rates and Charges” and “—Limitations on Additional Obligations Payable from Revenues” and in this summary of the Resolution under the captions “Certain Definitions” and “Reserve Fund for Certain Bonds.” The written consents to the Proposed Amendments of the holders and registered owners of at least 60% of the Bonds outstanding have been filed with SMUD or the Trustee, as required by the Resolution. However, while certain Bonds remain outstanding SMUD must also obtain the written consents of certain bond insurers to implement the Proposed Amendments. SMUD expects to implement the Proposed Amendments when the written consents of such bond insurers are obtained or when the Bonds insured by such bond insurers are no longer outstanding. The final maturity date of the insured Bonds is July 1, 2024.

Certain Definitions

“Assumed Interest Payments” means for any fiscal year or period interest which would accrue during such fiscal year or period on an amount equal to the then unamortized balance of the remaining sum of Assumed Principal Payments at the Assumed Interest Rate.

“Assumed Interest Rate” for any Parity Bond means an interest rate equal to the “Bond Buyer Revenue Bond Index” most recently published in The Bond Buyer prior to the date of issuance of the Parity Bond to which the Assumed Interest Rate is applicable.

“Assumed Principal Payments” means for any fiscal year or period the sum of all amortized portions of each Excluded Principal Payment which fall within such fiscal year or period after the Excluded Principal Payments have been amortized (for purposes of this definition) equally over the years (pro rata in the case of a partial year) in the period commencing on the date of issuance of the Parity Bonds to which such Excluded Principal Payment relates and ending on the date which is 30 years from such date of issuance. Notwithstanding the foregoing, if Parity Bonds determined by SMUD to be an Excluded Principal Payment are refinanced with Parity Bonds determined by SMUD to be another Excluded Principal Payment, (1) Assumed Principal Payments with respect to the refinancing Parity Bonds shall not include any amount of principal which has previously been assumed amortized with respect to the refinanced Parity Bonds and (2) the period over which the refinancing Parity Bonds shall be assumed to be amortized shall be the period commencing on the date of issuance of the refinancing Parity Bonds and ending on the date which is 30 years from the date of issuance of the refinanced Parity Bonds.

“Electric System” means the entire electric system of SMUD, together with all additions, betterments, extensions and improvements.

“Energy Payments” means, when used with respect to the Electric System, all actual costs incurred, or charges made therefor, by SMUD in any particular fiscal year or period to which said term is applicable for purchased power (including power purchased from any special district included within the boundaries of SMUD), electric and thermal energy and capacity under contracts providing for payments by SMUD for electric or thermal energy or capacity whether or not such energy or capacity is delivered or capable of being delivered or otherwise made available to or received by or for the account of SMUD.

“Excluded Principal Payments” means each payment of principal on Parity Bonds which the Board of Directors of SMUD determines (on a date not later than the date of issuance of such Parity Bonds) that SMUD intends to refinance at or prior to the maturity date(s) of such Parity Bonds or otherwise to pay with moneys which are not Revenues. No such determination shall affect the security for such Parity Bonds or the obligation of SMUD to pay such payments from Revenues.

“Financial Products Agreement” means an interest rate swap, cap, collar, option, floor, forward or other hedging agreement, arrangement or security, however denominated, entered into by SMUD with a Qualified Provider not for investment purposes but with respect to specific Parity Bonds for the purpose of (1) reducing or otherwise managing SMUD’s risk of interest rate changes or (2) effectively converting SMUD’s interest rate exposure, in whole or in part, from a fixed rate exposure to a variable rate exposure, or from a variable rate exposure to a fixed rate exposure.

“Financial Product Payments” means payments periodically required to be paid to a counterparty by SMUD pursuant to a Financial Products Agreement.

“Financial Product Receipts” means amounts periodically required to be paid to SMUD by a counterparty pursuant to a Financial Products Agreement.

“Maintenance and Operation Costs” means all actual maintenance and operation costs incurred by SMUD (including purchased power and fuel costs) or charges therefor made in conformity with generally accepted accounting principles, exclusive in all cases of depreciation, or obsolescence charges or reserves therefor, amortization of intangibles or other entries of a similar nature, interest charges and charges for the payment of principal of SMUD debt.

“Net Revenues” for any fiscal period means the sum of (a) the Revenues for such fiscal period plus (b) the amounts, if any, withdrawn by SMUD from the Rate Stabilization Fund for treatment as Revenues for such fiscal period, less the sum of (c) all Maintenance and Operation Costs for such fiscal period, (d) all Energy Payments for such fiscal period not included in Maintenance and Operation Costs for such fiscal period, and (e) the amounts, if any, withdrawn by SMUD from Revenues for such fiscal period for deposit in the Rate Stabilization Fund pursuant to the Resolution.

“Parity Bonds” includes the Bonds and all revenue bonds issued on a parity with the Bonds as provided or permitted in the Resolution. No Parity Bonds (other than the Bonds) are currently outstanding.

“Qualified Provider” means any financial institution or insurance company which is a party to a Financial Products Agreement if the unsecured long-term debt obligations of such financial institution or insurance company (or of the parent or a subsidiary of such financial institution or insurance company if such parent or subsidiary unconditionally guarantees the performance of such financial institution or insurance company under such Financial Products Agreement and the Trustee receives an opinion of

counsel to the effect that such guarantee is a valid and binding agreement of such parent or subsidiary), or obligations secured or supported by a letter of credit, contract, guarantee, agreement, insurance policy or surety bond issued by such financial institution or insurance company (or such guarantor parent or subsidiary), are rated in one of the two highest rating categories of a national rating agency (without regard to any gradation or such rating category) at the time of the execution and delivery of the Financial Products Agreement.

“Rate Stabilization Fund” means the fund by that name established in the Resolution. From time to time, after provision for debt service, SMUD may deposit in the Rate Stabilization Fund from remaining Revenues such amounts as SMUD shall determine, provided that deposits may be made until (but not after) the date 120 days after the end of such fiscal year. SMUD may withdraw amounts from the Rate Stabilization Fund only for inclusion in Revenues for any fiscal year, such withdrawals to be made until (but not after) 120 days after the end of such fiscal year. All interest or other earnings on deposits in the Rate Stabilization Fund shall be withdrawn therefrom and accounted for as Revenues. Notwithstanding the foregoing, no deposit of Revenues to the Rate Stabilization Fund may be made to the extent such Revenues were included in an engineer’s certificate submitted in connection with the issuance of additional revenue bonds payable from Revenues and withdrawal of the Revenues to be deposited in the Rate Stabilization Fund from the Revenues employed in rendering said engineer’s certificate would have caused noncompliance with the provisions of the Resolution restricting issuance of additional obligations or securities payable from Revenues or to the extent any withdrawal of amounts from remaining Revenues for the Rate Stabilization Fund for any fiscal year would have reduced the debt service ratio referred to in this Appendix under the caption “Reserve Fund for Certain Bonds” to or below 1.40.

“Revenues” means all charges received for, and all other income and receipts derived by SMUD from the operation of the Electric System, or arising from the Electric System (consisting primarily of income derived from the sale or use of electric energy generated, transmitted or distributed by facilities of the Electric System, but also including receipts from the sale of property pertaining to the Electric System or incidental to the operation of the Electric System or from services performed by SMUD in connection with the Electric System and revenues derived from certain wholesale, but not retail, sales of water), but exclusive in every case of any moneys derived from the levy or collection of taxes upon any taxable property in SMUD.

“Subsidy” means any subsidy, reimbursement or other payment from the federal government of the United States of America under the American Recovery and Reinvestment Act of 2009 (or any similar legislation or regulation of the federal government of the United States of America or any other governmental entity or any extension of any of such legislation or regulation).

Reserve Fund for Certain Bonds

The Electric Revenue Bond Reserve Fund (the “Reserve Fund”) is created under the Resolution. The Reserve Fund secures all Bonds issued prior to January 1, 2004 that are currently outstanding (and not otherwise deemed to be paid and discharged under the Resolution) and may secure additional Bonds issued in the future. However, the Reserve Fund does not secure and will not be available to pay debt service on the 2024 Series M Bonds.

After the close of each fiscal year, SMUD shall determine the ratio (herein called the “debt service ratio”) of (1) the Net Revenues during said fiscal year to (2) the maximum annual debt service during the period of three fiscal years next following said fiscal year on all Bonds and Parity Bonds then outstanding. For this purpose, the term “maximum annual debt service” shall mean the sum of (i) the interest falling due on serial bonds and term bonds, (ii) the principal amount of serial bonds falling due by

their terms, and (iii) the amount of minimum sinking fund payments required, as computed for the year in which such sum shall be a maximum. Interest during construction which has been funded and provided for shall not be included in “minimum annual debt service” for the purpose of the above calculation.

So long as the debt service ratio shall exceed 1.40, the amount required to be maintained in the Reserve Fund shall be an amount such that the amount in the combined reserve funds of all Parity Bonds then outstanding will at no time be less than the current annual interest requirements on all then outstanding Parity Bonds, except only bonds (if any) for which payment has been provided in advance. If the debt service ratio in any fiscal year shall fall below 1.40, the Treasurer shall set aside in the Reserve Fund or in any other reserve fund or funds established for any one or more issues of the Parity Bonds (on or before the first day of each month of the next succeeding fiscal year) from the first available Net Revenues an amount not less than 15% of the sum of the current monthly interest requirements of all Parity Bonds then outstanding until the next year in which the debt service ratio shall exceed 1.40 or until the aggregate amount in the combined reserve funds established for all of the Parity Bonds (including the Reserve Fund) is equal to the maximum annual debt service on all of the Parity Bonds then outstanding, whichever shall first occur.

For purposes of the above calculation, the interest rates of Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Bonds bear a rate or rates of interest for a known period or periods of time, such interest rate or rates for such period or periods, and thereafter, for the portion of the calculation period not covered by such known period or periods, the interest rate shall be the greater of the numerical maximum rate that such Bonds may vary or be adjusted to and the numerical maximum rate (if any) that the interest rate for such Bonds may be fixed to, in both cases as set forth in the supplemental resolution authorizing such Bonds, or if such rate or rates have been increased in accordance with such supplemental resolution at such increased rate or rates.

Any amount in the Reserve Fund at any time in excess of the balance required to be then maintained therein shall be released to SMUD for any SMUD use.

SMUD shall not be required, notwithstanding anything herein contained, to maintain in the combined reserve funds appertaining to all Parity Bonds of SMUD, an aggregate amount in excess of the maximum annual debt service requirements in any subsequent fiscal year on all of the then outstanding Parity Bonds.

Any moneys at any time in any of said reserve funds shall be held by the Treasurer in trust for the benefit of the holder or holders from time to time of the Bonds and the coupons appertaining thereto entitled to be paid therewith, and SMUD shall not have any beneficial right or interest in any such moneys.

Notwithstanding the foregoing, a Supplemental Resolution adopted after the Forty-Eighth Supplemental Resolution may provide that a Series of Bonds issued pursuant to such Supplemental Resolution shall not be secured by the Reserve Fund. In such event, (i) payments of the principal of and interest on such Bonds shall be excluded from all calculations made in respect of the amount to be maintained in the Reserve Fund and (ii) amounts on deposit in the Reserve Fund shall not be applied to the payment of the principal of or interest on such Bonds, even if no other moneys are available therefor.

The 2024 Series M Bonds are not secured by the Reserve Fund.

In lieu of maintaining and depositing moneys in the Reserve Fund, SMUD may maintain and deposit in the Reserve Fund, for the sole benefit of the holders of Parity Bonds, a letter of credit (1) which is issued by a bank with a credit rating at the time of deposit of such letter of credit into the Reserve Fund within one of the top two rating categories (without regard to any refinement or graduation of such rating category by numerical modifier or otherwise) of Moody's Investors Service ("Moody's") and Standard & Poor's Rating Group, a division of The McGraw-Hill Companies, Inc. ("S&P"), (2) the repayment obligation with respect to which is not secured by a lien on assets of SMUD senior to any lien which secures the Bondholders and (3) which has a term of at least 364 days from the date of issuance thereof. If the credit rating of the bank issuing such letter of credit falls below such top two rating categories, SMUD shall within twelve months of such downgrading either (a) substitute a new letter of credit satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or an irrevocable surety bond policy satisfying the requirements of the immediately succeeding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). At least 120 days prior to the expiration date of a letter of credit on deposit in the Reserve Fund, SMUD shall either (a) substitute a new letter of credit satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or an irrevocable surety bond policy satisfying the requirements of the immediately succeeding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). Any such letter of credit shall permit SMUD to draw amounts thereunder for deposit in the Reserve Fund which, together with any moneys on deposit in, or surety bond policy available to fund, the Reserve Fund, are not less than the balance required to then be maintained in the Reserve Fund (the "Reserve Fund Requirement") and which may be applied to any purpose for which moneys in the Reserve Fund may be applied. SMUD shall make a drawing on such letter of credit and deposit the moneys obtained from drawing in the Reserve Fund (a) whenever moneys are required for the purposes for which Reserve Fund moneys may be applied, and (b) prior to any expiration or termination thereof; provided, however, that no such drawing need be made if other moneys or an irrevocable surety bond are available in the Reserve Fund in the amount of the Reserve Fund Requirement.

In lieu of maintaining and depositing moneys in the Reserve Fund, SMUD also may maintain and deposit in the Reserve Fund, for the sole benefit of the holders of the Bonds, an irrevocable surety bond policy (1) which is issued by a bond insurance company with a claims-paying ability rating at the time of deposit of such surety bond policy into the Reserve Fund within one of the top two rating categories (without regard to any refinement or graduation of such rating category by numerical modifier or otherwise) from Moody's and S&P, (2) the repayment obligation with respect to which is not secured by a lien on assets of SMUD senior to any lien which secures the Bondholders and (3) has a term of at least 364 days from the date of issuance thereof. If the credit rating of the bond insurance company issuing such surety bond policy falls below such top two rating categories, SMUD shall, within twelve months of such downgrading, either (a) substitute a new surety bond policy satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or a letter of credit satisfying the requirements of the immediately preceding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). At least 120 days prior to the expiration date of a surety bond policy on deposit in the Reserve Fund, SMUD shall either (a) substitute a new surety bond policy satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or a letter of credit satisfying the requirements of the immediately preceding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). Any such surety bond policy shall permit SMUD to obtain amounts thereunder for deposit in the Reserve Fund which, together with any moneys on deposit in, or letter of credit available to fund, the Reserve Fund, are not less than the Reserve Fund Requirement and which may be applied to any purpose for which moneys in the Reserve Fund may be applied. SMUD shall make a drawing on such surety bond policy and deposit the proceeds derived from such drawing in the Reserve Fund (a) whenever moneys are required for the purposes for which Reserve Fund moneys may be applied, and (b) prior to

any expiration or termination thereof; provided, however, that no such drawing need be made if other moneys or a letter of credit are available in the Reserve Fund in the amount of the Reserve Fund Requirement.

Notwithstanding anything to the contrary in the prior two paragraphs, if at any time that there is on deposit in the Reserve Fund a combination of cash, a letter of credit and/or a surety bond as contemplated above, SMUD shall draw first on such cash to the extent required and available, then on (1) such surety bond and letter of credit on a pro rata basis (if both a surety bond and letter of credit are available) to the extent required and available, or (2) such surety bond or letter of credit (if either a surety bond or letter of credit, but not both, is available) to the extent required and available.

For purposes of calculating the “debt service ratio” and, unless otherwise specified in a Supplemental Resolution providing for the issuance of a series of Parity Bonds, the amount required to be maintained in the Reserve Fund as described above: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that SMUD receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by SMUD with respect to or in connection with such Parity Bonds during such period of time.

Additional Covenants

The Resolution contains the following additional covenants, among others:

1. That the Electric System will be maintained in good repair, working order and condition at all times, and will be continuously operated in an efficient and economical manner.
2. That no electric energy shall be supplied free by SMUD, and a reasonable wholesale charge will be made for water distributed at any cost to SMUD and such charge will be deemed Revenues; but SMUD may supply without charge water furnished to it without distribution cost, and any moneys received from any retail sales of water will not be deemed Revenues.
3. That all taxes and governmental charges and other lawful claims which might become a lien on the Electric System or the Revenues or impair the security of the Bonds will be paid and discharged when due.
4. That SMUD will comply with all lawful orders of any governmental agency or authority having jurisdiction in the premises (except while the validity or application thereof is being contested in good faith) and with all necessary permits and licenses issued by the NRC.
5. That no lease or agreement will be entered into, or sale or other disposition of essential property made, that would impair the operation of the Electric System or the rights of Bondholders with respect to the Revenues; provided, however, that notwithstanding the foregoing or any other provision of the Master Resolution, SMUD may sell or otherwise dispose of its accounts receivable and customer loan balances due to SMUD provided that SMUD delivers to the Trustee:
 - (a) a Certificate of SMUD to the effect that the amount derived by SMUD from the sale or other disposition of such accounts receivable or loan balances is a result of the sale or other disposition of such accounts receivable or loan balances upon fair and reasonable terms no

less favorable to SMUD than the terms of a comparable arm's-length transaction treated as a sale and not a loan under generally accepted accounting principles; and

(b) a written statement or report of an independent certified public accountant to the effect that, based on the audited financial statements of SMUD for the most recent fiscal year for which audited financial statements are available and after giving effect to such transaction by reducing Revenues for such fiscal year by the difference between the face amount of such accounts receivable or loan balances and the amount derived by SMUD from the sale or other disposition of such accounts receivable or loan balances, the debt service ratio computed pursuant to the Master Resolution would not have been reduced to less than 1.40:1.0.

6. That proper records and accounts will be maintained of all transactions relating to the Electric System and the Revenues (open to inspection by the Trustee and the holders of not less than 10 percent in principal amount of the Bonds), to be audited annually by an independent certified public accountant within 90 days after close of the fiscal year, and copies of such financial statements supplied to Bondholders on request.

7. That insurance adequate in amounts and as to risks covered will be maintained against such risks as are usually insurable in connection with similar electric systems, and in addition public liability and property damage insurance in amounts not less than \$1,000,000 per accident and adequate fidelity bonds on all officers and employees of SMUD handling or responsible for SMUD funds, subject in each case to the condition that such insurance is obtainable at reasonable rates and upon reasonable terms and conditions. See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – INSURANCE” attached to this Official Statement for a description of SMUD’s insurance.

8. That the net proceeds realized by SMUD in the event all or any part of the Electric System is taken by eminent domain proceedings will be applied to the redemption or retirement of all Bonds and Parity Bonds if sufficient therefor, and, if not, then pro rata to the redemption or retirement of Bonds and Parity Bonds or to new facilities if the additional Revenues to be derived therefrom will sufficiently offset the loss of Revenues resulting from such eminent domain so that the ability of SMUD to meet its obligations will not be substantially impaired.

9. That SMUD will at all times use its best efforts to maintain the powers, functions and duties now reposed in it pursuant to law.

10. That SMUD will establish and at all times maintain and collect rates and charges for the sale or use of its electric energy sufficient to permit SMUD to purchase power or issue and sell Bonds or Parity Bonds to finance additions, betterments, extensions and improvements to the Electric System as may be reasonably necessary to satisfy its then projected electric demand upon its Electric System, and that unless the Board determines that SMUD will be able to satisfy such demand through the purchase of electric energy, SMUD will proceed with all reasonable diligence to issue and sell such Bonds or Parity Bonds.

11. That SMUD will not create, or permit the creation of, any mortgage or lien upon the Electric System or any property essential to the proper operation of the Electric System or to the maintenance of the Revenues. SMUD will not create, or permit the creation of, any pledge, lien, charge or encumbrance upon the Revenues except only as provided in the Master Resolution; provided that, notwithstanding the foregoing or any other provision of the Master Resolution, SMUD may create a pledge, lien, charge or encumbrance upon its accounts receivable and customer loan balances due to SMUD (which pledge, lien, charge or encumbrance shall be prior to any pledge, lien, charge or

encumbrance created or made pursuant to the Master Resolution, including without limitation the pledge of Revenues made pursuant to the Master Resolution) to secure indebtedness with a term of one year or less provided that the principal amount of such indebtedness does not exceed 50% of the aggregate face amount of the accounts receivable and customer loan balances due to SMUD as shown on SMUD's most recent audited financial statements.

Amendment of the Resolution

The Resolution and the rights and obligations of SMUD and of the holders of the Bonds may be modified or amended at any time pursuant to the affirmative vote at a meeting of Bondholders, or with the written consent without a meeting, of the holders of 60 percent in aggregate principal amount of the Bonds then outstanding, provided that no such modification or amendment shall (i) extend the fixed maturity of any Bond, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon or reduce any premium payable upon the redemption thereof, without the consent of the holder of each Bond so affected, or (ii) reduce the aforesaid percentage of Bonds required for consent to an amendment or modification, without the consent of the holders of all the Bonds then outstanding. Modifications or amendments may be made, without the consent of any Bondholders, to add covenants of SMUD or to surrender rights reserved by SMUD in the Resolution, to cure ambiguities or defective or inconsistent provisions or in regard to questions arising under the Resolution without adversely affecting the interests of the Bondholders, or to provide for the issuance of a series of Bonds, subject to the provisions contained in the Resolution with respect thereto.

Events of Default and Remedies of Bondholders

The Resolution declares each of the following to be an event of default:

- (a) Failure to pay the principal of and premium on any Bond when due and payable;
- (b) Failure to pay any installment of interest on any Bond when due and payable, if such default continues for a period of 30 days;
- (c) Default by SMUD in the observance of any of the covenants, agreements or conditions on its part in the Resolution or in the Bonds, if such default continues for a period of 60 days after written notice thereof (specifying such default and requiring the same to be remedied) has been given to SMUD by the Trustee, or to SMUD and the Trustee by the holders of not less than 25 percent in aggregate principal amount of the Bonds at the time outstanding; and
- (d) If, under the provisions of any law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of SMUD or of the whole or any substantial part of its property, and such custody or control shall not be terminated or stayed within 60 days.

In the event of default, the Trustee or the holders of not less than a majority in aggregate principal amount of the outstanding Bonds may, upon written notice to SMUD, declare the principal of all outstanding Bonds, and the interest accrued thereon, to be due and payable immediately. The Trustee is appointed as trustee to represent Bondholders and may take such action as may seem appropriate to it, and, upon the written request of the holders of 25 percent in aggregate principal amount of the outstanding Bonds, and upon being furnished with indemnity satisfactory to it, will take such action on behalf of Bondholders as is specified in such written request. Each Bondholder is entitled to proceed to protect and enforce the rights vested in such holder by the Resolution by such appropriate judicial proceedings as such holder deems most effectual.

The rights of Bondholders are limited and restricted to the use and application of Revenues as provided in the Resolution and do not extend to the levy of any attachment or execution upon or forfeiture of any of the properties of SMUD or to any moneys derived by SMUD from the levy or collection of taxes.

In addition to the limitations on remedies contained in the Resolution, the rights and remedies provided by the Bonds and the Resolution, as well as the enforcement by SMUD of contracts with customers of the Electric System, may be limited by and are subject to bankruptcy, insolvency, reorganization and other laws affecting the enforcement of creditors' rights.

Refunding of 2024 Series M Bonds

If Refunding Bonds are issued for the purpose of refunding 2024 Series M Bonds, then SMUD is authorized to apply proceeds of the sale of such Refunding Bonds to the payment of the purchase price of direct noncallable obligations of the United States of America ("Treasury Obligations") to be held by the Trustee to insure the payment or retirement at or before maturity of all or a portion of the outstanding 2024 Series M Bonds. Upon deposit with the Trustee, in trust, of money or Treasury Obligations (including, but not limited to, direct obligations of the United States of America issued in book-entry form on the books of the Department of the Treasury of the United States of America), or any combination thereof, sufficient, together with the interest to accrue on any such Treasury Obligations, to pay or redeem all or a portion of 2024 Series M Bonds then outstanding at or before their maturity date, all liability of SMUD in respect of such 2024 Series M Bonds shall cease, determine and be completely discharged, and the holders thereof shall thereafter be entitled only to payment by SMUD out of the money and Treasury Obligations deposited with the Trustee for their payment. If the liability of SMUD shall cease and determine with respect to all or a portion of the 2024 Series M Bonds, then said 2024 Series M Bonds shall not be considered to be outstanding Bonds for any purpose of the Resolution.

Discharge of Resolution

The Resolution may be discharged by depositing with the Trustee in trust, moneys or Federal Securities or general obligation bonds of the State of California, in such amount as the Trustee shall determine will, together with the interest to accrue thereon, be fully sufficient to pay and discharge the indebtedness on all Bonds at or before their respective maturity dates.

Investment of Funds

Moneys in any fund established by the Resolution may be invested in bonds, notes, certificates of indebtedness, bills, bankers acceptances or other securities in which funds of SMUD may be legally invested as provided by the law in effect at the time of such investment. Currently this investment authority includes, among other things, the Local Agency Investment Fund which is administered by the Treasurer of the State of California for the investment of funds belonging to local agencies in the State of California.

APPENDIX E

PROPOSED FORM OF LEGAL OPINION FOR 2024 SERIES M BONDS

[Closing Date]

Sacramento Municipal Utility District
Sacramento, California

Sacramento Municipal Utility District
Electric Revenue Bonds, 2024 Series M
(Final Opinion)

Ladies and Gentlemen:

We have acted as bond counsel to the Sacramento Municipal Utility District (“SMUD”) in connection with the issuance of \$ _____ aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Bonds, 2024 Series M (the “2024 Series M Bonds”), issued pursuant to Resolution No. 6649 of the Board of Directors of SMUD, adopted January 7, 1971 (the “Master Resolution”), as supplemented and amended by later resolutions of said Board of Directors (as so supplemented and amended, the “Resolution”), including Resolution No. 24-03-[], adopted March 21, 2024 (the “Sixty-Seventh Supplemental Resolution”). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Resolution.

In such connection, we have reviewed the Resolution; the Tax Certificate, dated the date hereof (the “Tax Certificate”), executed by SMUD; opinions of counsel to SMUD and the Trustee; certificates of SMUD, the Trustee and others; and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after original delivery of the 2024 Series M Bonds on the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after original delivery of the 2024 Series M Bonds on the date hereof. Accordingly, this letter speaks only as of its date and is not intended to, and may not, be relied upon or otherwise used in connection with any such actions, events or matters. Our engagement with respect to the 2024 Series M Bonds has concluded with their issuance, and we disclaim any obligation to update this letter. We have assumed the genuineness of all documents and signatures provided to us and the due and legal execution and delivery thereof by, and validity against, any parties other than SMUD. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all covenants and agreements contained in the Resolution and the Tax Certificate, including (without limitation) covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the 2024 Series M Bonds to be included in gross income for federal income tax purposes.

We call attention to the fact that the rights and obligations under the 2024 Series M Bonds, the Resolution and the Tax Certificate and their enforceability may be subject to bankruptcy, insolvency, receivership, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to

or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against governmental entities such as SMUD in the State of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinion with respect to the state or quality of title to or interest in any of the property described in or as subject to the lien of the Resolution or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such property. Our services did not include financial or other non-legal advice. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement, dated _____, 2024, or other offering material relating to the 2024 Series M Bonds and express no opinion or view with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The 2024 Series M Bonds constitute the valid and binding limited obligations of SMUD.
2. The Resolution, including the Sixty-Seventh Supplemental Resolution, has been duly adopted by, and constitutes the valid and binding obligation of, SMUD. The Resolution creates a valid pledge, to secure the payment of the principal of and interest on the 2024 Series M Bonds, of the Net Revenues, subject to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution.
3. Interest on the 2024 Series M Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. Interest on the 2024 Series M Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. We observe that interest on the 2024 Series M Bonds included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. We express no opinion regarding other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2024 Series M Bonds.

Faithfully yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

per

APPENDIX F

FORM OF CONTINUING DISCLOSURE AGREEMENT

This Continuing Disclosure Agreement (the “Disclosure Agreement”) is executed and delivered by the Sacramento Municipal Utility District (the “Issuer”) and U.S. Bank Trust Company, National Association, in its capacity as Dissemination Agent (the “Dissemination Agent”) in connection with the issuance of \$_____ aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Bonds, 2024 Series M (the “2024 Series M Bonds”). The 2024 Series M Bonds are being issued pursuant to the Issuer’s Resolution No. 6649, adopted on January 7, 1971, as amended and supplemented by supplemental resolutions, including Resolution No. 24-03-[], adopted on March 21, 2024 (the “Resolution”). Pursuant to Section 146.11 of the Resolution, the Issuer and the Dissemination Agent covenant and agree as follows:

SECTION 1. Purpose of the Disclosure Agreement. This Disclosure Agreement is being executed and delivered by the Issuer and the Dissemination Agent for the benefit of the Holders and Beneficial Owners of the 2024 Series M Bonds and in order to assist the Participating Underwriters in complying with S.E.C. Rule 15c2-12(b)(5).

SECTION 2. Definitions. In addition to the definitions set forth in the Resolution, which apply to any capitalized term used in this Disclosure Agreement unless otherwise defined in this Section 2, the following capitalized terms shall have the following meanings:

“Annual Report” shall mean any Annual Report provided by the Issuer pursuant to, and as described in, Sections 3 and 4 of this Disclosure Agreement.

“Beneficial Owner” shall mean any person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any 2024 Series M Bonds (including persons holding Bonds through nominees, depositories or other intermediaries).

“Disclosure Representative” shall mean the Treasurer of the Issuer or his or her designee, or such other officer or employee as the Issuer shall designate in writing to the Trustee from time to time.

“Dissemination Agent” shall mean U.S. Bank Trust Company, National Association, acting in its capacity as Dissemination Agent hereunder, or any successor Dissemination Agent designated in writing by the Issuer and which has filed with the Trustee a written acceptance of such designation.

“EMMA” shall mean the MSRB’s Electronic Municipal Market Access system.

“Financial Obligation” shall mean, for purposes of the Listed Events set out in Section 5(a)(15) and Section 5(a)(16), a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term “Financial Obligation” shall not include municipal securities (as defined in the Securities Exchange Act of 1934, as amended) as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule.

“Listed Events” shall mean any of the events listed in Section 5(a) of this Disclosure Agreement.

“MSRB” shall mean the Municipal Securities Rulemaking Board.

“Participating Underwriters” shall mean any of the original underwriters of the 2024 Series M Bonds required to comply with the Rule in connection with offering of the 2024 Series M Bonds.

“Repository” shall mean the MSRB through EMMA or any other entity or system designated or authorized by the Securities and Exchange Commission to receive reports pursuant to the Rule.

“Rule” shall mean Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

“State” shall mean the State of California.

SECTION 3. Provision of Annual Reports.

(a) The Issuer shall, or shall cause the Dissemination Agent to, not later than one hundred eighty (180) days after the end of the Issuer’s fiscal year (presently December 31), commencing with the report for the 2024 Fiscal Year, provide to each Repository an Annual Report which is consistent with the requirements of Section 4 of this Disclosure Agreement. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may include by reference other information as provided in Section 4 of this Disclosure Agreement; provided that the audited financial statements of the Issuer may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the fiscal year changes for the Issuer, the Issuer shall give notice of such change in the same manner as for a Listed Event under Section 5 hereof.

(b) Not later than fifteen (15) Business Days prior to the dates specified in subsection (a) for providing the Annual Report to each Repository, the Issuer shall provide its respective Annual Report to the Dissemination Agent. If by such date, the Dissemination Agent has not received a copy of the Annual Report from the Issuer, the Dissemination Agent shall contact the Issuer to determine if the Issuer is in compliance with the first sentence of this subsection (b).

(c) If the Dissemination Agent is unable to verify that an Annual Report of the Issuer has been provided to each Repository by the date required in subsection (a), the Dissemination Agent shall send a notice to each Repository and the MSRB (if the MSRB is not a Repository) in substantially the form attached as Exhibit A.

(d) The Dissemination Agent shall:

(1) determine each year prior to the date for providing the Annual Report the name and address of each Repository and then-applicable rules and procedures for filing the Annual Report with each Repository, if any; and

(2) file a report with the Issuer certifying that the Annual Report has been provided pursuant to this Disclosure Agreement, stating the date it was provided and listing each Repository to which it was provided.

SECTION 4. Content of Annual Reports.

(a) The Issuer’s Annual Report shall contain or include by reference the following:

(1) The audited financial statements of the Issuer for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board and where not in conflict with the Financial Accounting Standards Board (“FASB”) pronouncements or accounting principles prescribed by FASB. If the Issuer’s audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the

Annual Report shall contain unaudited financial statements, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.

(2) An update of the following types of information contained in Appendix A to the official statement, dated _____, 2024 and related to the 2024 Series M Bonds:

(i) The table entitled “Power Supply Resources.”

(ii) The table entitled “Projected Requirements and Resources to Meet Load Requirements.”

(iii) The table entitled “Average Class Rates” (to the extent such table relates to rates and revenues of the Issuer).

(iv) The table entitled “Selected Operating Data.”

(v) The table entitled “Unconsolidated Financial Data.”

(vi) The balance in the Decommissioning Trust Fund, the current estimate of decommissioning costs, the decommissioning costs to date, and the annual contribution level to the Decommissioning Trust Fund, all relating to the Rancho Seco Nuclear Power Plant.

(vii) The table entitled “Estimated Capital Requirements.”

(b) Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the Issuer or public entities related thereto, which have been submitted to each Repository or the Securities and Exchange Commission. If the document included by reference is a final official statement, it must be available from the MSRB. The Issuer shall clearly identify each such other document so included by reference.

SECTION 5. Reporting of Listed Events.

(a) Pursuant to the provisions of this Section 5, the Issuer shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the 2024 Series M Bonds not later than ten (10) business days after the occurrence of the event:

(1) principal and interest payment delinquencies;

(2) non-payment related defaults, if material;

(3) unscheduled draws on any applicable debt service reserves reflecting financial difficulties;

(4) unscheduled draws on credit enhancement reflecting financial difficulties;

(5) substitution of credit or liquidity providers, or their failure to perform;

(6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701 TEB) or other material notices or determinations with respect to the tax status of the 2024 Series M Bonds or other material events adversely affecting the tax status of the 2024 Series M Bonds;

- (7) modifications to rights of Bondholders, if material;
- (8) bond calls, if material, and tender offers;
- (9) defeasances;
- (10) release, substitution or sale of property securing repayment of the 2024 Series M Bonds, if material;
- (11) rating changes;
- (12) bankruptcy, insolvency, receivership or similar event of the Issuer;
- (13) the consummation of a merger, consolidation, or acquisition involving the Issuer or the sale of all or substantially all of the assets of the Issuer, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (14) appointment of a successor or additional trustee or the change of name of the Trustee, if material;
- (15) incurrence of a Financial Obligation of the Issuer, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Issuer, any of which affect Bondholders, if material; and
- (16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Issuer, any of which reflect financial difficulties.

(b) For the purpose of the event identified in Section 5(a)(12), the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Issuer in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Issuer, or if such jurisdiction has been assumed by leaving the existing governmental body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Issuer.

(c) Whenever the Issuer obtains knowledge of the occurrence of a Listed Event, the Issuer shall as soon as possible determine if such event is required to be reported pursuant to this Section 5.

(d) If the Issuer has determined that such event is required to be reported pursuant to this Section 5, the Issuer shall promptly notify the Dissemination Agent in writing. Such notice shall instruct the Dissemination Agent to report the occurrence pursuant to subsection (e).

(e) If the Dissemination Agent has been instructed by the Issuer to report the occurrence of a Listed Event, the Dissemination Agent shall file a notice of such occurrence with the MSRB (if the MSRB is not a Repository) and each Repository.

SECTION 6. Termination of Reporting Obligation. The obligations of the Issuer and the Dissemination Agent under this Disclosure Agreement shall terminate upon the legal defeasance, prior redemption or payment in full of all of the 2024 Series M Bonds. If such termination occurs prior to the final maturity of the 2024 Series M Bonds, the Issuer shall give notice of such termination in the same manner as for a Listed Event under Section 5.

SECTION 7. Dissemination Agent; Filings.

(a) The Issuer may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Agreement, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the Issuer pursuant to this Disclosure Agreement. If at any time there is not any other designated Dissemination Agent, the Issuer shall be the Dissemination Agent. The initial Dissemination Agent shall be U.S. Bank Trust Company, National Association.

(b) Unless and until one or more different or additional Repositories are designated or authorized by the Securities and Exchange Commission, all filings with a Repository which are required by this Disclosure Agreement shall be filed with the MSRB through EMMA and shall be in an electronic format and accompanied by such identifying information as prescribed by the MSRB in accordance with the Rule.

SECTION 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Agreement, the Issuer and the Dissemination Agent may amend this Disclosure Agreement, and any provision of this Disclosure Agreement may be waived, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions of Sections 3(a), 4, or 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the 2024 Series M Bonds, or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the 2024 Series M Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver either (1) is approved by the Holders of 60% of the 2024 Series M Bonds, or (2) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Holders or Beneficial Owners of the 2024 Series M Bonds.

In the event of any amendment or waiver of a provision of this Disclosure Agreement, the Issuer shall describe such amendment in its next respective Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or, in the case of a change of accounting principles from those described in Section 4(a)(1), on the presentation) of financial information or operating data being presented by the Issuer. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (1) notice of such change shall be given in the same manner as for a Listed Event under Section 5, and (2) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

SECTION 9. Additional Information. Nothing in this Disclosure Agreement shall be deemed to prevent the Issuer from disseminating any other information, using the means of dissemination set forth in this Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Agreement. If the Issuer chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Agreement, the Issuer shall have no obligation under this Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

SECTION 10. Default. In the event of a failure of the Issuer or the Trustee to comply with any provision of this Disclosure Agreement, the Trustee shall, at the request of any Participating Underwriters or the Holders of at least 25% aggregate principal amount of Outstanding Bonds and upon being indemnified to its satisfaction from and against any costs, liability, expenses and fees of the Trustee, including, without limitation fees and expenses of its attorneys, or any Holder or Beneficial Owner of the 2024 Series M Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Issuer or the Dissemination Agent, as the case may be, to comply with its obligations under this Disclosure Agreement. A default under this Disclosure Agreement shall not be deemed an Event of Default under the Resolution, and the sole remedy under this Disclosure Agreement in the event of any failure of the Issuer or the Dissemination Agent to comply with this Disclosure Agreement shall be an action to compel performance.

SECTION 11. Duties, Immunities and Liabilities of Dissemination Agent. The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement, and the Issuer agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys' fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's negligence or willful misconduct. The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement and no implied duties for obligation shall be read into this Disclosure Agreement against the Dissemination Agent. The Dissemination Agent has no power to enforce nonperformance on the part of the Issuer. The Dissemination Agent shall be paid compensation by the Issuer for its services provided hereunder in accordance with its schedule of fees provided to the Issuer and all expenses, legal fees and costs of the Dissemination Agent made or incurred by the Dissemination Agent in the performance of its duties hereunder. The obligations of the Issuer under this Section shall survive resignation or removal of the Dissemination Agent and payment of the 2024 Series M Bonds.

SECTION 12. Notices. Any notices or communications to or among any of the parties to this Disclosure Agreement may be given as follows:

To the Issuer:	Sacramento Municipal Utility District 6201 S Street, MS B405 Sacramento, California 95817 Attention: Treasurer Telephone: (916) 732-6509 Fax: (916) 732-5835
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To the Dissemination Agent: U.S. Bank Trust Company, National Association
Global Corporate Trust
One California Street, Suite 1000
San Francisco, California 94111
Telephone: (415) 677-3699
Fax: (415) 677-3769

To the Trustee: U.S. Bank Trust Company, National Association
Global Corporate Trust
One California Street, Suite 1000
San Francisco, California 94111
Telephone: (415) 677-3699
Fax: (415) 677-3769

The Issuer, the Dissemination Agent and the Trustee may, by giving written notice hereunder to the other person listed above, designate a different address or telephone number(s) to which subsequent notices or communications should be sent. Unless specifically otherwise required by the context of this Disclosure Agreement, a party may give notice by any form of electronic transmission capable of producing a written record. Each such party shall file with the Trustee and Dissemination Agent information appropriate to receiving such form of electronic transmission.

SECTION 13. Beneficiaries. This Disclosure Agreement shall inure solely to the benefit of the Issuer, the Dissemination Agent, the Participating Underwriters and Holders and Beneficial Owners from time to time of the 2024 Series M Bonds, and shall create no rights in any other person or entity.

SECTION 14. Counterparts. This Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

Dated: _____, 2024.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By _____
Treasurer

U.S. BANK TRUST COMPANY, NATIONAL
ASSOCIATION,
as Dissemination Agent

By _____
Authorized Officer

ACKNOWLEDGED:

U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION, as Trustee

By: _____
Authorized Officer

EXHIBIT A

NOTICE TO REPOSITORIES OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: Sacramento Municipal Utility District
Name of Bond Issue: Electric Revenue Bonds, 2024 Series M
Name of Borrower: Sacramento Municipal Utility District
Date of Issuance: _____, 2024

NOTICE IS HEREBY GIVEN that the Sacramento Municipal Utility District (the “Issuer”) has not provided an Annual Report with respect to the above-named Bonds as required by Section 146.11 of Resolution No. 24-03-[] adopted March 21, 2024, by the Issuer. [The Issuer anticipates that the Annual Report will be filed by _____.]

Dated: _____

U.S. BANK TRUST COMPANY, NATIONAL
ASSOCIATION,
on behalf of Sacramento Municipal Utility District

cc: Sacramento Municipal Utility District

**[APPENDIX G
CLIMATE BOND VERIFIER'S REPORT]**

DRAFT PRELIMINARY OFFICIAL STATEMENT

[2024 SERIES N]

NEW ISSUE - FULL BOOK-ENTRY**Ratings: See “RATINGS” herein**

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD, based upon an analysis of existing laws, regulations, rulings and court decisions and, assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the 2024 Series N Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. In the further opinion of Bond Counsel, interest on the 2024 Series N Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. Bond Counsel observes that interest on the 2024 Series N Bonds included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2024 Series N Bonds. See “TAX MATTERS.”



**[\$[PRINCIPAL AMOUNT]*
ELECTRIC REVENUE REFUNDING BONDS, 2024 SERIES N**

Dated: Date of Delivery**Due: [May 15], as shown on the inside cover**

The Electric Revenue Refunding Bonds, 2024 Series N (the “2024 Series N Bonds”) will be issued pursuant to the provisions of Resolution No. 6649 of the Sacramento Municipal Utility District (“SMUD”), as amended and supplemented, and will be payable from the Net Revenues of the Electric System of SMUD, as described herein. The 2024 Series N Bonds are being issued to (i) refund certain of SMUD’s outstanding Bonds (as defined herein) [and (ii) pay certain costs associated with the issuance of the 2024 Series N Bonds]. See “PLAN OF FINANCE.”

The 2024 Series N Bonds will mature in the years and amounts as shown on the inside cover. Interest on the 2024 Series N Bonds will accrue at the rates set forth on the inside cover and be payable on [November 15, 2024], and semiannually thereafter on each [May 15 and November 15].

The 2024 Series N Bonds are subject to redemption prior to maturity as described herein. See “THE 2024 SERIES N BONDS – Redemption Provisions.”

The 2024 Series N Bonds will be issued in fully registered form and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository (the “Securities Depository”) for the 2024 Series N Bonds. Individual purchases of interests in the 2024 Series N Bonds may be made in book-entry form only, in the principal amount of \$5,000 or any integral multiple thereof. Purchasers of such interests will not receive certificates representing their interests in the 2024 Series N Bonds. Principal and interest are payable directly to the Securities Depository by U.S. Bank Trust Company, National Association, Trustee and Paying Agent. Upon receipt of payments of principal and interest, the Securities Depository will in turn remit such principal and interest to the Securities Depository’s Direct Participants (as such term is herein defined) for subsequent disbursement to the purchasers of interests in the 2024 Series N Bonds, as described herein. See APPENDIX C – “BOOK-ENTRY SYSTEM.”

The principal of and interest on the 2024 Series N Bonds, together with the debt service on other Parity Bonds (as defined herein), are payable exclusively from and secured by a pledge of the Net Revenues of the Electric System of SMUD. Neither the credit nor the taxing power of SMUD or the State of California is pledged to the payment of the 2024 Series N Bonds.

The information presented on this cover page is for general reference only and is qualified in its entirety by reference to the entire Official Statement and the documents summarized and described herein.

The 2024 Series N Bonds are offered when, as and if issued and received by the Underwriters, subject to the approval of the validity of the 2024 Series N Bonds and certain other legal matters by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD. Certain legal matters will be passed on for the Underwriters by their counsel, Nixon Peabody LLP, San Francisco, California. It is expected that the 2024 Series N Bonds will be available for delivery through the facilities of DTC on or about [_____] , 2024*.

BofA Securities

Barclays
Morgan Stanley

Goldman Sachs & Co. LLC

J.P. Morgan
**Wells Fargo Corporate &
Investment Banking**

[____], 2024

* Preliminary, subject to change.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

[\$[PRINCIPAL AMOUNT]*
ELECTRIC REVENUE REFUNDING BONDS, 2024 SERIES N

MATURITY SCHEDULE*

Due ([May 15])	Principal Amount	Interest Rate	Yield	CUSIP†
	\$			

\$[_____] * ___% Term 2024 Series N Bonds due [May 15], 20[___]*, Yield ___%, CUSIP†: _____

\$[_____] * ___% Term 2024 Series N Bonds due [May 15], 20[___]*, Yield ___%, CUSIP†: _____

* Preliminary, subject to change.

† CUSIP® is a registered trademark of the American Bankers Association. CUSIP® data herein is provided by CUSIP Global Services (CGS), which is managed on behalf of the American Bankers Association by FactSet Research Systems Inc. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP® numbers have been assigned by an independent company not affiliated with SMUD or the Underwriters and are included solely for the convenience of the registered owners of the applicable 2024 Series N Bonds. Neither SMUD nor the Underwriters are responsible for the selection or uses of these CUSIP® numbers, and no representation is made as to their correctness on the applicable 2024 Series N Bonds or as included herein. The CUSIP® number for a specific maturity is subject to being changed after the execution and delivery of the 2024 Series N Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the 2024 Series N Bonds.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

BOARD OF DIRECTORS

Rosanna Herber, President
Gregg Fishman, Vice President
Brandon Rose
Nancy Bui-Thompson
Rob Kerth
Dave Tamayo
Heidi Sanborn

OFFICERS AND EXECUTIVES

Paul Lau, Chief Executive Officer and General Manager
Frankie McDermott, Chief Operating Officer
Scott Martin, Chief Financial Officer
Brandy Bolden, Chief Customer Officer
Suresh Kotha, Chief Information Officer
Jose Bodipo-Memba, Chief Diversity Officer
Laura Lewis, Chief Legal and Government Affairs Officer and General Counsel
Lora Anguay, Chief Zero Carbon Officer
Farres Everly, Chief Marketing & Communications Officer
Russell Mills, Treasurer
Lisa Limcaco, Controller

SPECIAL SERVICES

ORRICK, HERRINGTON & SUTCLIFFE LLP
Bond Counsel

U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION
Trustee and Paying Agent

BAKER TILLY US, LLP, Madison, Wisconsin
Independent Accountants

PFM FINANCIAL ADVISORS LLC, Philadelphia, Pennsylvania
Municipal Advisor

[_____]
Verification Agent

No dealer, broker, salesperson or other person has been authorized by SMUD or the Underwriters to give any information or to make any representations with respect to the 2024 Series N Bonds other than those contained in this Official Statement and, if given or made, such information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell nor the solicitation of an offer to buy, nor shall there be any sale of the 2024 Series N Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein has been obtained from SMUD and other sources which are believed to be reliable, but it is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation of, the Underwriters. The information and expressions of opinion stated herein are subject to change without notice. The delivery of this Official Statement shall not, under any circumstances, create any implication that there has been no change in the affairs of SMUD since the date hereof. The Underwriters have provided the following sentence for inclusion in this Official Statement: The Underwriters have reviewed the information in this Official Statement in accordance with and as part of their responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

The 2024 Series N Bonds have not been registered under the Securities Act of 1933, as amended, in reliance upon an exemption from the registration requirements contained in such Act. The 2024 Series N Bonds have not been registered or qualified under the securities laws of any state.

CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS IN THIS OFFICIAL STATEMENT

Certain statements included or incorporated by reference in this Official Statement constitute “forward-looking statements.” Such statements generally are identifiable by the terminology used, such as “plan,” “expect,” “estimate,” “budget” or other similar words.

The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements described to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. SMUD does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations or events, conditions or circumstances on which such statements are based occur.

This Official Statement, including any supplement or amendment hereto, is intended to be deposited with the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access website. SMUD maintains a website and social media accounts. However, the information presented therein is not part of this Official Statement and should not be relied upon in making investment decisions with respect to the 2024 Series N Bonds. The references to internet websites in this Official Statement are shown for reference and convenience only; unless explicitly stated to the contrary, the information contained within the websites is not incorporated herein by reference and does not constitute part of this Official Statement.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
PLAN OF FINANCE.....	3
Issuance of 2024 Series N Bonds and Refunding of Refunded Bonds	3
Issuance of 2024 Series M Bonds	5
ESTIMATED SOURCES AND USES OF FUNDS	6
THE 2024 SERIES N BONDS	6
Redemption Provisions	6
DEBT SERVICE SCHEDULE.....	8
SECURITY FOR THE BONDS	8
General.....	8
Consent to Amendments to the Resolution.....	8
Allocation of Revenues.....	9
Rates and Charges.....	10
Limitations on Additional Obligations Payable from Revenues.....	11
SACRAMENTO MUNICIPAL UTILITY DISTRICT	12
ABSENCE OF LITIGATION REGARDING THE 2024 SERIES N BONDS.....	13
UNDERWRITING	13
MUNICIPAL ADVISOR.....	14
APPROVAL OF LEGAL PROCEEDINGS.....	14
FINANCIAL STATEMENTS	15
TAX MATTERS.....	15
CONTINUING DISCLOSURE UNDERTAKING	17
RATINGS	18
[VERIFICATION	18
MISCELLANEOUS	18
APPENDIX A INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT	1
APPENDIX B 2023 AND 2022 CONSOLIDATED FINANCIAL STATEMENTS AND REPORT OF INDEPENDENT ACCOUNTANTS.....	1
APPENDIX C BOOK-ENTRY SYSTEM	1
APPENDIX D SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION.....	1
APPENDIX E PROPOSED FORM OF LEGAL OPINION FOR 2024 SERIES N BONDS.....	1
APPENDIX F FORM OF CONTINUING DISCLOSURE AGREEMENT	1

OFFICIAL STATEMENT
Relating to
SACRAMENTO MUNICIPAL UTILITY DISTRICT
§[PRINCIPAL AMOUNT]*
ELECTRIC REVENUE REFUNDING BONDS, 2024 SERIES N

INTRODUCTION

This Official Statement, including the cover page and Appendices attached hereto, describes the Sacramento Municipal Utility District (“SMUD”), a political subdivision of the State of California (the “State”), and its §[PRINCIPAL AMOUNT]* Electric Revenue Refunding Bonds, 2024 Series N (the “2024 Series N Bonds”), in connection with the sale by SMUD of the 2024 Series N Bonds. The 2024 Series N Bonds are being issued to (i) refund certain of SMUD’s outstanding Bonds (as defined herein) (the “Refunded Bonds”) [and (iii) pay certain costs associated with the issuance of the 2024 Series N Bonds]. See “PLAN OF FINANCE.”

The 2024 Series N Bonds are part of an Electric Revenue Bond authorization of SMUD and are issued pursuant to Resolution No. 6649 (the “Master Resolution”) adopted in 1971, as amended and supplemented, and applicable California law, including Article 6a of Chapter 6 of the Municipal Utility District Act (Public Utilities Code Sections 12850 to 12860) (the “Act”), the Revenue Bond Law of 1941 (Government Code Section 54300 *et seq.*) and Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (Government Code Section 53580 *et seq.*). The issuance of the 2024 Series N Bonds was authorized on March 21, 2024, by the Board of Directors of SMUD by a Sixty-Seventh Supplemental Resolution (the “Sixty-Seventh Supplemental Resolution”) supplemental to the Master Resolution. The Master Resolution and all supplemental resolutions, including the Sixty-Seventh Supplemental Resolution, are collectively referred to herein as the “Resolution.” See APPENDIX D — “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION.”

The purchasers of the 2024 Series N Bonds, by virtue of their purchase of the 2024 Series N Bonds, will consent to certain amendments to the Resolution. See “SECURITY FOR THE BONDS – Consent to Amendments to the Resolution.”

The 2024 Series N Bonds and other bonds issued on a parity therewith pursuant to the Resolution are collectively referred to herein as the “Bonds.” The Bonds, together with other Parity Bonds (as defined herein), are payable solely from the Net Revenues of the Electric System. See “SECURITY FOR THE BONDS.” As of December 31, 2023, Bonds in the aggregate principal amount of \$1,783,965,000 were outstanding under the Resolution.

The issuance of the 2024 Series N Bonds and the refunding of the Refunded Bonds are components of a plan of finance (the “Plan of Finance”) that also includes the issuance of SMUD’s Electric Revenue Bonds, 2024 Series M (the “2024 Series M Bonds”) to finance and refinance certain improvements and additions to SMUD’s Electric System, including by paying the outstanding principal amount of SMUD’s commercial paper notes at maturity. The issuance of the 2024 Series N Bonds is not contingent upon the implementation of the other components of the Plan of Finance, and SMUD is not obligated to implement any of the components of the Plan of Finance. If the Plan of Finance is implemented in whole, then upon completion of the Plan of Finance, Bonds in the aggregate principal

* Preliminary, subject to change.

amount of \$[_____]” are expected to be outstanding under the Resolution. See “PLAN OF FINANCE.”

Although the Resolution establishes an “Electric Revenue Bond Reserve Fund” (the “Reserve Fund”), the Reserve Fund does *not* secure and will *not* be available to pay debt service on the 2024 Series N Bonds. The Reserve Fund secures all Bonds issued prior to January 1, 2004 that are currently outstanding (and not otherwise deemed to be paid and discharged under the Resolution) and may secure additional Bonds issued in the future.

U.S. Bank Trust Company, National Association serves as trustee and paying agent under the Resolution (in such capacities, the “Trustee” and the “Paying Agent” respectively).

From time to time, SMUD issues Subordinated Electric Revenue Bonds (the “Subordinated Bonds”) pursuant to Resolution No. 85-11-1 of SMUD, adopted on November 7, 1985, as amended and supplemented (the “Subordinate Resolution”). As of December 31, 2023, Subordinated Bonds in the aggregate principal amount of \$332,020,000 were outstanding. The Subordinated Bonds are payable solely from the Net Subordinated Revenues of the Electric System and are subordinate in right of payment to the prior payment of principal of and interest on the Bonds (including the 2024 Series N Bonds).

SMUD also issues commercial paper notes (the “Notes”) from time to time. As of December 31, 2023, Notes in the principal amount of \$150,000,000 were outstanding. Currently, Notes in the aggregate principal amount of \$400,000,000 may be outstanding at any one time, but SMUD reserves the right to increase or decrease the aggregate principal amount of the Notes that may be outstanding at any one time in the future. The Notes are secured by letters of credit issued by commercial banks. The Notes (and SMUD’s obligations to repay drawings under the letters of credit) are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Bonds (including the 2024 Series N Bonds) and the Subordinated Bonds. Drawings under the letters of credit, to the extent not repaid immediately from the proceeds of commercial paper or other available SMUD funds, are repayable with interest over a period of five years. The letters of credit currently expire in August of 2025 and March of 2027. SMUD expects to pay all \$150,000,000 of the outstanding principal amount of the Notes with a portion of the proceeds of the 2024 Series M Bonds. See “PLAN OF FINANCE.”

SMUD has also previously issued its taxable and tax-exempt revolving notes pursuant to a revolving credit agreement with a commercial bank (collectively, the “Revolving Credit Facility”). As of December 31, 2023, no principal amount was outstanding under the Revolving Credit Facility. Currently, the aggregate principal amount that can be outstanding under the Revolving Credit Facility at any one time is limited to \$100,000,000. However, SMUD reserves the right to increase or decrease the aggregate principal amount that can be outstanding at any one time under the Revolving Credit Facility in the future. SMUD’s payment obligations under the Revolving Credit Facility are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Bonds (including the 2024 Series N Bonds) and the Subordinated Bonds. The current term of the Revolving Credit Facility expires in February 2026.

SMUD is responsible for the acquisition, generation, transmission and distribution of electric power to its service area, which includes most of Sacramento County and small portions of Placer and Yolo counties. For the year ended December 31, 2023, SMUD served a population of approximately 1.5 million with a total annual retail load of approximately 10,104 million kilowatt hours (“kWh”). SMUD

* Preliminary, subject to change.

owns and operates an electric system which, as of December 31, 2023, included generating facilities owned and operated by SMUD with an aggregate generating capacity of approximately 775 megawatts (“MW”), local gas-fired plants owned and operated by a joint powers authority and managed by SMUD with an aggregate generating capacity of approximately 1,087 MW, over which SMUD has exclusive control of dispatch, and purchased power with an aggregate generating capacity of approximately 1,590 MW and transmission and distribution facilities. SMUD’s power requirements exceed its generating capacity and thus SMUD has agreements with others (including the Local Gas-Fired Plants as defined in APPENDIX A) for the purchase of a portion of its power requirements. See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – POWER SUPPLY AND TRANSMISSION – Power Supply Resources.” Continuing development of SMUD’s business strategy in response to changing environmental and regulatory requirements has had, and is expected to continue to have, a major effect on SMUD’s power supply planning. See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – BUSINESS STRATEGY.”

Pursuant to a Continuing Disclosure Agreement, dated the date of issuance of the 2024 Series N Bonds (the “Continuing Disclosure Agreement”) between SMUD and the Trustee, SMUD will covenant for the benefit for the holders of the 2024 Series N Bonds and owners of beneficial interest in the 2024 Series N Bonds to provide certain financial information and operating data and to provide certain notices. See “CONTINUING DISCLOSURE UNDERTAKING” and APPENDIX F – “FORM OF CONTINUING DISCLOSURE AGREEMENT.”

The information presented in this Introduction is qualified in its entirety by reference to this entire Official Statement and the documents summarized or described herein. This Official Statement, including the Appendices, summarizes the terms of the 2024 Series N Bonds, the Resolution and certain agreements, contracts and other arrangements, some of which currently exist and others of which may exist in the future. The summaries of and references to all documents, statutes, regulations and other instruments referred to herein do not purport to be complete, comprehensive or definitive, and each such summary and reference is qualified in its entirety by reference to each such document, statute, regulation or instrument.

Capitalized terms not otherwise defined in this Official Statement shall have the meanings ascribed thereto in APPENDIX D – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Certain Definitions” or in the Resolution.

PLAN OF FINANCE

Issuance of 2024 Series N Bonds and Refunding of Refunded Bonds

The proceeds of the 2024 Series N Bonds will be used to (i) refund the \$200,000,000 outstanding principal amount of the Sacramento Municipal Utility District Electric Revenue Bonds, 2009 Series V (the “2009 Series V Bonds”), (ii) refund the \$250,000,000 outstanding principal amount of the Sacramento Municipal Utility District Electric Revenue Bonds, 2010 Series W (the “2010 Series W Bonds” and, together with the 2009 Series V Bonds, the “Refunded Bonds”) [and (iii) pay certain costs associated with the issuance of the 2024 Series N Bonds].

The Refunded Bonds were issued as bonds designated as “Build America Bonds” under the provisions of the American Recovery and Reinvestment Act of 2009 (the “Recovery Act”). At the time the Refunded Bonds were issued, SMUD expected to receive cash subsidy payments from the United States Treasury equal to 35% of the interest payable on the Refunded Bonds as required by sections 54AA and 6431 of the Internal Revenue Code of 1986, as amended (the “Code”) (as such sections were

added to the Code by the Recovery Act). However, as a result of the enactment of the Budget Control Act of 2011 (the “Budget Control Act”) and the American Taxpayer Relief Act of 2012 (the “Taxpayer Relief Act”) the subsidy payments for the Refunded Bonds became subject to sequestration and have been reduced to an amount less than 35% of the interest payable on the Refunded Bonds as originally required by sections 54AA and 6431 of the Code. See also APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Build America Bonds Subsidy Payments.*”

The 2009 Series V Bonds are subject to extraordinary optional redemption upon the occurrence of an “Extraordinary Event.” Pursuant to the extraordinary optional redemption provisions for the 2009 Series V Bonds, an “Extraordinary Event” will have occurred if SMUD determines that a material adverse change has occurred to Section 54AA or 6431 of the Code (as such Sections were added by Section 1531 of the Recovery Act, pertaining to Build America Bonds) or there is any guidance published by the Internal Revenue Service or the United States Treasury with respect to such Sections or any other determination by the Internal Revenue Service or the United States Treasury, which determination is not the result of an act or omission by SMUD to satisfy the requirements to receive the 35% cash subsidy payment from the United States Treasury, pursuant to which SMUD’s 35% cash subsidy payment from the United States Treasury is reduced or eliminated.

The 2010 Series W Bonds are subject to extraordinary optional redemption upon the occurrence of a “Tax Law Change.” Pursuant to the extraordinary optional redemption provisions for the 2010 Bonds, “Tax Law Change” means legislation has been enacted by the Congress of the United States or passed by either House of the Congress, or a decision has been rendered by a court of the United States, or an order, ruling, regulation (final, temporary or proposed) or official statement has been made by or on behalf of the Treasury Department of the United States, the Internal Revenue Service or other governmental agency of appropriate jurisdiction, the effect of which, as reasonably determined by SMUD, would be to suspend, reduce or terminate the payment from the United States Treasury to SMUD with respect to the 2010 Series W Bonds, or to state or local government issuers generally with respect to obligations of the general character of the 2010 Series W Bonds, pursuant to Sections 54AA or 6431 of the Code of an amount equal to 35% of the interest due thereon on each interest payment date (the “Subsidy Payments”); provided, that such suspension, reduction or termination of the Subsidy Payments is not due to a failure by the District to comply with the requirements under the Code to receive such Subsidy Payments.

The extraordinary optional redemption provisions for each series of the Refunded Bonds are described in the related Official Statement for such series of Refunded Bonds. The Official Statements for the Refunded Bonds can be found at the following links:

2009 Series V Bonds: <https://emma.msrb.org/EP520561-EP406639-EP803941.pdf>

2010 Series W Bonds: <https://emma.msrb.org/EA393164-EA308929-EA704612.pdf>

The foregoing links are provided for reference and convenience only. The Official Statements for the Refunded Bonds are not incorporated herein by reference and do not constitute part of this Official Statement.

For various reasons, including but not limited to, the enactment of the Budget Control Act and the Taxpayer Relief Act and the resulting reduction of the cash subsidy payments required to be paid by the United States Treasury to SMUD with respect to the Refunded Bonds pursuant to section 6431 of the Code, SMUD has determined that an “Extraordinary Event” has occurred with respect to the 2009 Series V Bonds and that a “Tax Law Change” has occurred with respect to the 2010 Series W Bonds. Therefore,

SMUD expects to redeem the Refunded Bonds pursuant to the extraordinary optional redemption provisions applicable to each series of the Refunded Bonds.

[A portion of the proceeds of the 2024 Series N Bonds, [together with other available funds], will be deposited in one or more escrow funds (the “Escrow Funds”) established under one or more escrow agreements between SMUD and the Trustee. The moneys so deposited will be invested in direct obligations of the United States of America (the “Federal Securities”), the interest on and principal of which, together with other moneys held in the Escrow Funds, are expected to be in an amount sufficient to pay the interest on the Refunded Bonds due on [_____] (the “Redemption Date”) and to redeem the Refunded Bonds on the Redemption Date at their respective redemption prices. [Upon deposit, all liability of SMUD with respect to the Refunded Bonds (except for the obligation of SMUD to pay the interest on and redemption price of the Refunded Bonds from moneys on deposit in the Escrow Fund) will cease. The holders of the Refunded Bonds will be entitled to payment from SMUD solely from moneys or Federal Securities on deposit in the Escrow Fund, and the Refunded Bonds will no longer be outstanding under the Resolution.] [Notwithstanding the deposit to the Escrow Funds, the Refunded Bonds will remain outstanding, and SMUD will remain liable for the payment of the principal and redemption price of and interest on the Refunded Bonds, until the Refunded Bonds are actually redeemed in full on the Redemption Date.] The Federal Securities and moneys in the Escrow Funds will not secure the 2024 Series N Bonds and will not be available to pay the principal of or interest on the 2024 Series N Bonds.]

[A portion of the proceeds of the 2024 Series N Bonds, [together with other available funds], will be used to pay the interest on the Refunded Bonds due on [_____] (the “Redemption Date”) and to redeem the Refunded Bonds on the Redemption Date at their respective redemption prices.]

The issuance of the 2024 Series N Bonds and the refunding of the Refunded Bonds are components of the Plan of Finance, as further described below. The issuance of the 2024 Series N Bonds is not contingent upon the implementation of the other components of the Plan of Finance, and SMUD is not obligated to implement any of the components of the Plan of Finance.

Issuance of 2024 Series M Bonds

Concurrently with the issuance of the 2024 Series N Bonds, SMUD expects to issue approximately \$[_____] * aggregate principal amount of the 2024 Series M Bonds. The proceeds of the 2024 Series M Bonds are expected to be used to finance and refinance certain improvements and additions to SMUD’s Electric System, including by paying the outstanding principal amount of SMUD’s commercial paper notes at maturity, [and pay certain costs associated with the issuance of the 2024 Series M Bonds].

* Preliminary, subject to change.

ESTIMATED SOURCES AND USES OF FUNDS

The estimated sources and uses of funds with respect to the 2024 Series N Bonds are as follows:

Sources of Funds:

Principal Amount	\$
[Net] Original Issue [Premium/Discount]	
[Interest Fund Release]	
SMUD Contribution	
Total Sources of Funds	\$

Uses of Funds:

Deposit to Escrow Fund for Refunded Bonds	\$
Costs of Issuance (including Underwriters’ Discount)	
Total Uses of Funds	\$

THE 2024 SERIES N BONDS

The 2024 Series N Bonds will mature in the years and amounts and bear interest at the rates set forth on the inside cover page hereof. Interest on the 2024 Series N Bonds will accrue from the date of delivery of the 2024 Series N Bonds, and will be payable on [November 15, 2024], and semiannually thereafter on each [May 15 and November 15] (each, an “Interest Payment Date”) to the owners thereof as of the first day of the month (whether or not such day is a Business Day) in which an Interest Payment Date occurs (each, a “Record Date”).

The 2024 Series N Bonds will be issued in fully registered form and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository (the “Securities Depository”) for the 2024 Series N Bonds. Individual purchases of interests in the 2024 Series N Bonds will be made in book-entry form only, in the principal amount of \$5,000 or any integral multiple thereof. Purchasers of such interests will not receive certificates representing their interests in the 2024 Series N Bonds. Principal and interest are payable directly to the Securities Depository by the Trustee. Upon receipt of payments of principal and interest, the Securities Depository will in turn remit such principal and interest to the Securities Depository’s Direct Participants (as such term is hereinafter defined) for subsequent disbursement to the purchasers of interests in the 2024 Series N Bonds. See APPENDIX C – “BOOK-ENTRY SYSTEM.”

Redemption Provisions*

Optional Redemption. On any date on or after [May 15], 20__, the 2024 Series N Bonds maturing on and after [May 15], 20__ are subject to redemption prior to their stated maturities at the option of SMUD, from any source of available funds, as a whole or in part, by lot, at the principal amount thereof, without premium, together with accrued interest to the date fixed for redemption.

Mandatory Redemption. The 2024 Series N Bonds maturing on [May 15], 20__, are subject to mandatory redemption prior to maturity, in part, by lot, from sinking fund payments required for the 2024 Series N Bonds by the Sixty-Seventh Supplemental Resolution at the principal amount thereof together with the accrued interest thereon to the date fixed for redemption, without premium, as shown below:

* Preliminary, subject to change.

Sinking Fund Payment Dates ([May 15])	Principal Amount
	\$

†

† Maturity.

The 2024 Series N Bonds maturing on [May 15], 20__, are subject to mandatory redemption prior to maturity, in part, by lot, from sinking fund payments required for the 2024 Series N Bonds by the Sixty-Seventh Supplemental Resolution at the principal amount thereof together with the accrued interest thereon to the date fixed for redemption, without premium, as shown below:

Sinking Fund Payment Dates ([May 15])	Principal Amount
	\$

†

† Maturity.

Selection of Bonds for Redemption. If less than all of a maturity of the 2024 Series N Bonds is to be redeemed, the Trustee shall select the 2024 Series N Bonds of such maturity to be redeemed, from the Outstanding 2024 Series N Bonds of such maturity not previously called for redemption, by lot in any manner the Trustee deems fair. For so long as the book-entry only system is in effect with respect to the 2024 Series N Bonds, DTC shall select the 2024 Series N Bonds to be redeemed in accordance with the procedures of DTC.

Notice of Redemption. Notice of redemption for the 2024 Series N Bonds will be given by publication at least once in financial newspapers or journals, selected by the Trustee, of general circulation in San Francisco, California, Chicago, Illinois, and New York, New York, each such publication to be not less than 20 nor more than 60 days before the date fixed for redemption, if at any time the 2024 Series N Bonds are not in book entry form. Notice also will be mailed to the registered owners of any 2024 Series N Bonds designated for redemption, but failure to mail such notice or any defect therein with respect to any particular 2024 Series N Bond will not affect the validity of the proceedings for the redemption of any other 2024 Series N Bonds. For so long as the book-entry-only system is in effect with respect to the 2024 Series N Bonds, the Trustee will mail notice of redemption solely to DTC or its nominee or its successor. Any failure of DTC or its successor, or of a direct or indirect DTC participant, to notify a beneficial owner of a 2024 Series N Bond of any redemption will not affect the sufficiency or validity of the redemption of any 2024 Series N Bond. See APPENDIX C – “BOOK-ENTRY SYSTEM.” SMUD may instruct the Trustee to give conditional notice of optional redemption, which may be conditioned upon the receipt of moneys or any other event.

DEBT SERVICE SCHEDULE

The following table sets forth the debt service requirements with respect to the 2024 Series N Bonds. See also APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Debt Service Requirements.*”

Calendar Year	Principal	Interest	Total
	\$	\$	\$
	\$	\$	\$

SECURITY FOR THE BONDS

General

The principal of and premium, if any, and interest on the Bonds, together with other Parity Bonds, are payable exclusively from, and are secured by a pledge (effected in the manner and to the extent provided in the Resolution) of, the Net Revenues of the Electric System of SMUD.

Neither the credit nor the taxing power of SMUD is pledged to the payment of the Bonds and the general fund of SMUD is not liable for the payment thereof. The owners of the Bonds cannot compel the exercise of any taxing power of SMUD or the forfeiture of any of its property. The Bonds are not a legal or equitable pledge, charge, lien or encumbrance upon any of SMUD’s property (including the Electric System) or upon any of its income, receipts or revenues except the Net Revenues of the Electric System to the extent of the pledge thereof contained in the Resolution.

Consent to Amendments to the Resolution

The purchasers of the 2024 Series N Bonds, by virtue of their purchase of the 2024 Series N Bonds, will consent to certain amendments to the Resolution (the “Proposed Amendments”). Such amendments are described in ***bold italic*** font herein under “SECURITY FOR THE BONDS – Rates and Charges” and “ – Limitations on Additional Obligations Payable from Revenues” and in APPENDIX D – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Certain Definitions” and “ – Reserve Fund for Certain Bonds.” The written consents to the Proposed Amendments of the holders and registered owners of at least 60% of the Bonds outstanding have been filed with SMUD or the Trustee, as required by the Resolution. However, while certain Bonds remain outstanding, SMUD must also obtain the written consents of certain bond insurers to implement the Proposed Amendments. SMUD expects to implement the Proposed Amendments when the written consents of such bond insurers are obtained or

when the Bonds insured by such bond insurers are no longer outstanding. The final maturity date of the insured Bonds is July 1, 2024.

Allocation of Revenues

After making an allocation of Revenues to Maintenance and Operation Costs and to Energy Payments not included in Maintenance and Operation Costs, the Treasurer of SMUD is required (subject to the last paragraph of this section) to set aside, on an equal priority with sums set aside for all other Parity Bonds, Net Revenues as follows:

First: To the Electric Revenue Bond Interest Fund, in approximately equal monthly installments on or before the first day of each month, an amount equal to at least one-fifth (1/5) of the aggregate amount of interest becoming due on the Bonds on the next succeeding semiannual interest payment date, until an amount sufficient to meet said interest payment is accumulated.

Second: To the Electric Revenue Bond Redemption Fund, to be set aside in the Principal Account and Sinking Fund, respectively, in approximately equal monthly installments on or before the first day of each month, an amount equal to at least one-tenth (1/10) of the aggregate amount of principal becoming due on serial Bonds and the aggregate minimum sinking fund payments required to be made with respect to term Bonds during the next ensuing 12 months, until an amount sufficient to meet the principal and sinking fund requirements on all Bonds outstanding is accumulated in said accounts, respectively.

Third: To the Electric Revenue Bond Reserve Fund, such amounts as any supplemental resolution authorizing the issuance of a series of Bonds may require to build up and maintain said fund.

If interest on Bonds of a series or maturity is payable more frequently than semiannually, the Treasurer of SMUD shall set aside out of Net Revenues in the Interest Fund such amounts as may be required to pay interest on the Bonds of such series or maturity on each interest payment date at least one month prior to such interest payment date. Allocation to the Electric Revenue Bond Redemption Fund and Electric Revenue Bond Reserve Fund shall be made as set forth above.

All remaining Revenues, after making the foregoing allocations, will be available to SMUD for all lawful SMUD purposes.

From time to time, SMUD may deposit in the Rate Stabilization Fund from such remaining Revenues such amounts as SMUD shall determine, provided that deposits in the Rate Stabilization Fund from remaining Revenues in any fiscal year may be made until (but not after) the date 120 days after the end of such fiscal year. SMUD may withdraw amounts from the Rate Stabilization Fund only for inclusion in Revenues for any fiscal year, such withdrawals to be made until (but not after) 120 days after the end of such fiscal year. All interest or other earnings upon deposits in the Rate Stabilization Fund shall be withdrawn therefrom and accounted for as Revenues. No deposit of Revenues to the Rate Stabilization Fund may be made to the extent such Revenues were included in any certificate submitted in connection with the issuance of additional bonds and withdrawal of the Revenues from the Revenues employed in rendering said certificate would have caused noncompliance with the additional bond provisions or to the extent withdrawals of the Revenues for any fiscal year would have reduced the debt

service ratio for such fiscal year to or below 1.40:1.00. See APPENDIX A – “RATES AND CUSTOMER BASE – Rates and Charges” for a description of the balance in the Rate Stabilization Fund.

With respect to Bonds of a series issued on or after October 1, 2003 (including the 2024 Series N Bonds), notwithstanding the foregoing, so long as the Bonds of such series or maturity are outstanding, the supplemental resolution authorizing the issuance of such series shall require the Treasurer, out of Net Revenues received by SMUD, to set aside in the Interest Fund and the Principal Account, respectively, such amounts as may be required so that an amount equal to the amount of principal and/or interest becoming due and payable on the Bonds of such series or maturity on each interest payment date and principal payment date is on deposit in the Interest Fund and the Principal Account, respectively, at such time on or prior to such interest payment date or principal payment date as shall be specified in the supplemental resolution authorizing such Bonds.

Rates and Charges

SMUD has covenanted in the Resolution to establish and at all times maintain and collect rates and charges for the sale or use of electric energy generated, transmitted, distributed or furnished by SMUD which, together with certain items of other income permitted under the Resolution, will yield Revenues at least sufficient, with respect to the ensuing 12 months, to pay and provide for all sums required for Maintenance and Operation Costs and Energy Payments not included in Maintenance and Operation Costs and, in addition, to provide an aggregate sum equal to at least 1.20 times the total amount required for the payment of principal and interest, together with any sinking fund or reserve fund payments, on the Bonds and all Parity Bonds, in each case during such 12 months.

For purposes of the calculations of payments to be made pursuant to the Resolution, the interest rates on Parity Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Parity Bonds bear a rate or rates of interest for a known period or periods of time, such rate or rates of interest for such period or periods and thereafter, for the portion of the calculation period not covered by such known period or periods, the Assumed Interest Rate.

For purposes of the above calculations of principal of and interest on Parity Bonds, if a Financial Products Agreement has been entered into by SMUD with respect to any Parity Bonds, interest on such Parity Bonds shall be included in the calculation of such principal and interest by including for each fiscal year or period an amount equal to the amount of interest payable on such Parity Bonds in such fiscal year or period at the rate or rates stated in such Parity Bonds plus any Financial Product Payments payable in such fiscal year or period minus any Financial Product Receipts receivable in such fiscal year or period; provided that in no event shall any calculation made pursuant to this clause result in a number less than zero being included in the calculation of such principal and interest.

For purposes of the above calculations of principal of and interest on Parity Bonds, Excluded Principal Payments shall be disregarded (but interest on the Parity Bonds to which such Excluded Principal Payments relate shall be included until but not after the stated due date when principal payments on such Parity Bonds are scheduled by their terms to commence) and Assumed Principal Payments and Assumed Interest Payments shall be included; and for purposes of the above calculations of interest on Parity Bonds, the interest rates on Parity Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Parity Bonds bear a rate or rates of interest for a known period or periods of time, such rate or rates of interest for such period or periods and thereafter, for the portion of the calculation period not covered by such known period or periods, the Assumed Interest Rate.

SMUD has full power to establish rates and charges for all SMUD services, and the levels of such rates are not subject to review or regulation by any other governmental agency, either federal or state.

For purposes of the calculations specified in this section: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that SMUD receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by SMUD with respect to or in connection with such Parity Bonds during such period of time.

See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Build America Bonds Subsidy Payments*” for a description of the current Subsidy that SMUD receives with respect to the Refunded Bonds.

See APPENDIX D hereto for the definitions of certain capitalized terms used in this section.

Limitations on Additional Obligations Payable from Revenues

The Resolution provides that SMUD will not, so long as any Bonds are outstanding, issue any obligations payable in whole or in part from Revenues except the following:

1. Refunding bonds issued solely to refund all or part of the Bonds or Parity Bonds;
2. General obligation bonds or other securities secured by the full faith and credit of SMUD;
3. Additional revenue bonds (including additional Bonds under the Resolution and additional Parity Bonds), payable on a parity with the Bonds, with an equal lien and charge upon the Revenues, but only subject to the following conditions:

(a) Such additional revenue bonds shall have been authorized for and the proceeds therefrom required to be applied to additions, betterments, extensions or improvements to the Electric System (and necessary costs of issuance, interest during construction and reserve funds);

(b) The proceedings for the issuance of such additional revenue bonds shall require SMUD to fix and collect rates and charges in an amount not less, with respect to such bonds, than the amounts required with respect to Bonds issued under the Resolution;

(c) SMUD shall not then be in default under the Resolution or other resolutions authorizing the issuance of Parity Bonds; and

(d) The Trustee shall receive a certificate of SMUD to the effect (i) that Net Revenues, after completion of the improvements proposed to be financed by such additional revenue bonds, will be sufficient to pay the principal of and interest (and bond reserve fund requirements) on all Bonds and Parity Bonds then outstanding and on such additional revenue bonds; and (ii) that for a period of 12 consecutive months during the 24 months immediately preceding the issuance of the additional revenue bonds the Net Revenues have been at least equal to 1.25 times maximum annual debt service on all Bonds and Parity Bonds then outstanding and on such additional revenue bonds (after adjusting Net Revenues to include 75 percent of the estimated additional Net Revenues to be derived from an increase in rates and charges or from the acquisition of an existing revenue producing electric system); and

4. Revenue bonds junior and subordinate to the Bonds and Parity Bonds.

For purposes of the above calculations, Excluded Principal Payments shall be disregarded (but interest on the Parity Bonds to which such Excluded Principal Payments relate shall be included until but not after the stated due date when principal payments on such Parity Bonds are scheduled by their terms to commence) and Assumed Principal Payments and Assumed Interest Payments shall be included; and for purposes of the above calculations of interest on Parity Bonds, the interest rates on Parity Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Parity Bonds bear a rate or rates of interest for a known period or periods of time, such rate or rates of interest for such period or periods and thereafter, for the portion of the calculation period not covered by such known period or periods, the Assumed Interest Rate.

For purposes of the above calculations of principal of and interest on Parity Bonds, if a Financial Products Agreement has been entered into by SMUD with respect to any Parity Bonds, interest on such Parity Bonds shall be included in the calculation of such principal and interest by including for each fiscal year or period an amount equal to the amount of interest payable on such Parity Bonds in such fiscal year or period at the rate or rates stated in such Parity Bonds plus any Financial Product Payments payable in such fiscal year or period minus any Financial Product Receipts receivable in such fiscal year or period; provided that in no event shall any calculation made pursuant to this clause result in a number less than zero being included in the calculation of such principal and interest.

For purposes of the calculations specified in this section: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that SMUD receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by SMUD with respect to or in connection with such Parity Bonds during such period of time.

See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Estimated Capital Requirements” for a description of SMUD’s projected capital requirements. Such capital requirements may be satisfied through the issuance of additional Bonds or Parity Bonds.

See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Build America Bonds Subsidy Payments*” for a description of the current Subsidy that SMUD receives with respect to the Refunded Bonds.

See APPENDIX D hereto for the definitions of certain capitalized terms used in this section.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

SMUD owns and operates an electric system that has provided retail electric service since 1946. SMUD’s current service area is approximately 900 square miles, and includes the principal parts of Sacramento County and small portions of Placer and Yolo counties. For a full description of SMUD, its history, organization, operations, and financial performance, certain developments in the energy markets, certain factors affecting the electric utility industry, including impacts from the COVID-19 pandemic, and certain regulatory and other matters, see APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT.”

ABSENCE OF LITIGATION REGARDING THE 2024 SERIES N BONDS

SMUD is not aware of any action, suit or proceeding, threatened or pending, to restrain or enjoin the issuance, sale or delivery of the 2024 Series N Bonds, or in any way contesting or affecting the validity of the 2024 Series N Bonds or any of the proceedings of SMUD taken with respect to the 2024 Series N Bonds. SMUD is not aware of any action, suit or proceeding, threatened or pending, questioning the corporate existence of SMUD, or the title of the officers of SMUD to their respective offices, or the power and authority of SMUD to execute and deliver the 2024 Series N Bonds. For a description of certain litigation in which SMUD is involved, see APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – LEGAL PROCEEDINGS.”

UNDERWRITING

BofA Securities, Inc. (“BofA”), as representative of itself, Barclays Capital Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC (“JPMS”), Morgan Stanley & Co. LLC and Wells Fargo Bank, National Association (each, an “Underwriter” and, collectively, the “Underwriters”) have jointly and severally agreed, subject to certain customary conditions to closing, to purchase the 2024 Series N Bonds from SMUD at an aggregate purchase price of \$_____ (being the aggregate principal amount of the 2024 Series N Bonds, [plus/less] [net] original issue [premium/discount] of \$_____, and less Underwriters’ discount of \$_____). The Underwriters will be obligated to purchase all 2024 Series N Bonds if any 2024 Series N Bonds are purchased. The Underwriters have agreed to make a public offering of the 2024 Series N Bonds at the initial offering prices set forth on the inside cover page hereof. The 2024 Series N Bonds may be offered and sold to certain dealers (including underwriters and other dealers depositing such bonds into investment trusts) at prices lower than such public offering prices, and such public offering prices may be changed, from time to time, by the Underwriters.

BofA, an Underwriter, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated (“MLPF&S”). As part of this arrangement, BofA may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA may compensate MLPF&S as a dealer for its selling efforts with respect to the 2024 Series N Bonds.

JPMS, one of the Underwriters of the 2024 Series N Bonds, has entered into negotiated dealer agreements (each, a “Dealer Agreement”) with each of Charles Schwab & Co., Inc. (“CS&Co.”) and LPL Financial LLC (“LPL”) for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement, each of CS&Co. and LPL may purchase 2024 Series N Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any 2024 Series N Bonds that such firm sells.

Morgan Stanley & Co. LLC., an Underwriter of the 2024 Series N Bonds, has entered into a retail distribution arrangement with its affiliate Morgan Stanley Smith Barney LLC. As part of the distribution arrangement, Morgan Stanley & Co. LLC may distribute municipal securities to retail investors through the financial advisor network of Morgan Stanley Smith Barney LLC. As part of this arrangement, Morgan Stanley & Co. LLC may compensate Morgan Stanley Smith Barney LLC for its selling efforts with respect to the 2024 Series N Bonds.

[Wells Fargo Corporate & Investment Banking (which may be referred to elsewhere as “CIB,” “Wells Fargo Securities” or “WFS”) is the trade name used for the corporate banking, capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including Wells Fargo Bank, National Association (“WFBNA”), a member of NFA, which conducts its municipal securities sales, trading and underwriting operations through the Wells Fargo Bank, N.A. Municipal Finance Group,

a separately identifiable department of WFBNA, registered with the U.S. Securities and Exchange Commission as a municipal securities dealer pursuant to Section 15B(a) of the Securities Exchange Act of 1934.]

[WFBNA, acting through its Municipal Finance Group, one of the Underwriters of the 2024 Series N Bonds, has entered into an agreement (the “WFA Distribution Agreement”) with its affiliate, Wells Fargo Clearing Services, LLC (which uses the trade name “Wells Fargo Advisors”) (“WFA”), for the distribution of certain municipal securities offerings, including the 2024 Series N Bonds. Pursuant to the WFA Distribution Agreement, WFBNA will share a portion of its underwriting compensation with respect to the 2024 Series N Bonds with WFA. WFBNA has also entered into an agreement (the “WFSLLC Distribution Agreement”) with its affiliate Wells Fargo Securities, LLC (“WFSLLC”), for the distribution of municipal securities offerings, including the 2024 Series N Bonds. Pursuant to the WFSLLC Distribution Agreement, WFBNA pays a portion of WFSLLC’s expenses based on its municipal securities transactions. WFBNA, WFSLLC, and WFA are each wholly-owned subsidiaries of Wells Fargo & Company.]

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for SMUD for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of, or issued for the benefit of, SMUD.

BofA Securities, Inc. is an affiliate of Bank of America, N.A. which has extended credit in other transactions to SMUD.

MUNICIPAL ADVISOR

SMUD has retained PFM Financial Advisors LLC, as Municipal Advisor in connection with various matters relating to the delivery of the 2024 Series N Bonds. The Municipal Advisor assumes no responsibility for the accuracy, completeness or fairness of the information contained in this Official Statement. The Municipal Advisor is an independent advisory firm and is not engaged in underwriting or distribution of securities. The Municipal Advisor will receive compensation that is contingent upon the sale, issuance and delivery of the 2024 Series N Bonds.

APPROVAL OF LEGAL PROCEEDINGS

The validity of the 2024 Series N Bonds and certain other legal matters are subject to the approval of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD. The approving opinion of Bond Counsel will be delivered with the 2024 Series N Bonds in substantially the form appearing in APPENDIX E. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Official Statement. Certain legal matters will be passed on for the Underwriters by Nixon Peabody LLP, San Francisco, California, counsel to the Underwriters. Counsel to the Underwriters will receive compensation that is contingent upon the sale, issuance and delivery of the 2024 Series N Bonds.

FINANCIAL STATEMENTS

SMUD's audited, consolidated financial statements for the years ended December 31, 2023 and December 31, 2022 are included in APPENDIX B attached to this Official Statement. These financial statements have been audited by Baker Tilly US, LLP, Madison, Wisconsin (the "Auditor"), for the periods indicated and to the extent set forth in their report thereon and should be read in their entirety. SMUD has not requested nor did it obtain permission from the Auditor to include the audited, consolidated financial statements as an appendix to this Official Statement. Accordingly, the Auditor has not performed any procedures to review the financial condition or operations of SMUD subsequent to the date of its report included therein, nor has it reviewed any information contained in this Official Statement.

TAX MATTERS

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD ("Bond Counsel"), based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the 2024 Series N Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code") and is exempt from State of California personal income taxes. Bond Counsel is of the further opinion that interest on the 2024 Series N Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. Bond Counsel observes that interest on the 2024 Series N Bonds included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2024 Series N Bonds. A complete copy of the proposed form of opinion of Bond Counsel is set forth in APPENDIX E hereto.

To the extent the issue price of any maturity of the 2024 Series N Bonds is less than the amount to be paid at maturity of such 2024 Series N Bonds (excluding amounts stated to be interest and payable at least annually over the term of such 2024 Series N Bonds), the difference constitutes "original issue discount," the accrual of which, to the extent properly allocable to each Beneficial Owner thereof, is treated as interest on the 2024 Series N Bonds which is excluded from gross income for federal income tax purposes and exempt from State of California personal income taxes. For this purpose, the issue price of a particular maturity of the 2024 Series N Bonds is the first price at which a substantial amount of such maturity of the 2024 Series N Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of the 2024 Series N Bonds accrues daily over the term to maturity of such 2024 Series N Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such 2024 Series N Bonds to determine taxable gain or loss upon trade or business disposition (including sale, redemption, or payment on maturity) of such 2024 Series N Bonds. Beneficial Owners of the 2024 Series N Bonds should consult their own tax advisors with respect to the tax consequences of ownership of 2024 Series N Bonds with original issue discount, including the treatment of Beneficial Owners who do not purchase such 2024 Series N Bonds in the original offering to the public at the first price at which a substantial amount of such 2024 Series N Bonds is sold to the public.

2024 Series N Bonds purchased, whether at original issuance or otherwise, for an amount higher than their principal amount payable at maturity (or, in some cases, at their earlier call date) ("Premium Bonds") will be treated as having amortizable bond premium. No deduction is allowable for the amortizable bond premium in the case of bonds, like the Premium Bonds, the interest on which is

excluded from gross income for federal income tax purposes. However, the amount of tax-exempt interest received, and a Beneficial Owner's basis in a Premium Bond, will be reduced by the amount of amortizable bond premium properly allocable to such Beneficial Owner. Beneficial Owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the 2024 Series N Bonds. SMUD has made certain representations and covenanted to comply with certain restrictions, conditions and requirements designed to ensure that interest on the 2024 Series N Bonds will not be included in federal gross income. Inaccuracy of these representations or failure to comply with these covenants may result in interest on the 2024 Series N Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the 2024 Series N Bonds. The opinion of Bond Counsel assumes the accuracy of these representations and compliance with these covenants. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken), or events occurring (or not occurring), or any other matters coming to Bond Counsel's attention after the date of issuance of the 2024 Series N Bonds may adversely affect the value of, or the tax status of interest on, the 2024 Series N Bonds. Accordingly, the opinion of Bond Counsel is not intended to, and may not, be relied upon in connection with any such actions, events or matters.

Although Bond Counsel is of the opinion that interest on the 2024 Series N Bonds is excluded from gross income for federal income tax purposes and is exempt from State of California personal income taxes, the ownership or disposition of, or the accrual or receipt of amounts treated as interest on, the 2024 Series N Bonds may otherwise affect a Beneficial Owner's federal, state or local tax liability. The nature and extent of these other tax consequences depends upon the particular tax status of the Beneficial Owner or the Beneficial Owner's other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the 2024 Series N Bonds to be subject, directly or indirectly, in whole or in part, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent Beneficial Owners from realizing the full current benefit of the tax status of such interest. The introduction or enactment of any such legislative proposals or clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the 2024 Series N Bonds. Prospective purchasers of the 2024 Series N Bonds should consult their own tax advisors regarding the potential impact of any pending or proposed federal or state tax legislation, regulations or litigation, as to which Bond Counsel expresses no opinion.

The opinion of Bond Counsel is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the 2024 Series N Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service ("IRS") or the courts. Furthermore, Bond Counsel cannot give and has not given any opinion or assurance about the future activities of SMUD, or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. SMUD has covenanted, however, to comply with the requirements of the Code.

Bond Counsel's engagement with respect to the 2024 Series N Bonds ends with the issuance of the 2024 Series N Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend SMUD or the Beneficial Owners regarding the tax-exempt status of the 2024 Series N Bonds in the event of an audit examination by the IRS. Under current procedures, Beneficial Owners would have little, if any, right to participate in the audit examination process. Moreover, because achieving judicial review in

connection with an audit examination of tax-exempt bonds is difficult, obtaining an independent review of IRS positions with which SMUD legitimately disagrees may not be practicable. Any action of the IRS, including but not limited to selection of the 2024 Series N Bonds for audit, or the course or result of such audit, or an audit of bonds presenting similar tax issues may affect the market price for, or the marketability of, the 2024 Series N Bonds, and may cause SMUD or the Beneficial Owners to incur significant expense.

Payments on the 2024 Series N Bonds generally will be subject to U.S. information reporting and possibly to “backup withholding.” Under Section 3406 of the Code and applicable U.S. Treasury Regulations issued thereunder, a non-corporate Beneficial Owner of 2024 Series N Bonds may be subject to backup withholding with respect to “reportable payments,” which include interest paid on the 2024 Series N Bonds and the gross proceeds of a sale, exchange, redemption, retirement or other disposition of the 2024 Series N Bonds. The payor will be required to deduct and withhold the prescribed amounts if (i) the payee fails to furnish a U.S. taxpayer identification number (“TIN”) to the payor in the manner required, (ii) the IRS notifies the payor that the TIN furnished by the payee is incorrect, (iii) there has been a “notified payee underreporting” described in Section 3406(c) of the Code or (iv) the payee fails to certify under penalty of perjury that the payee is not subject to withholding under Section 3406(a)(1)(C) of the Code. Amounts withheld under the backup withholding rules may be refunded or credited against a Beneficial Owner’s federal income tax liability, if any, provided that the required information is timely furnished to the IRS. Certain Beneficial Owners (including among others, corporations and certain tax-exempt organizations) are not subject to backup withholding. The failure to comply with the backup withholding rules may result in the imposition of penalties by the IRS.

CONTINUING DISCLOSURE UNDERTAKING

Pursuant to the Continuing Disclosure Agreement, SMUD will covenant for the benefit of the holders and the “Beneficial Owners” (as defined in the Continuing Disclosure Agreement) of the 2024 Series N Bonds to provide certain financial information and operating data relating to SMUD by not later than 180 days after the end of each of SMUD’s fiscal years (presently, each December 31), commencing with the report for the year ending December 31, 2024 (the “Annual Report”), and to provide notices of the occurrence of certain listed events with respect to the 2024 Series N Bonds. The Annual Report will be filed by or on behalf of SMUD with the Municipal Securities Rulemaking Board (the “MSRB”) through its Electronic Municipal Market Access system (“EMMA”) and any notices of such listed events will be filed by or on behalf of SMUD with the MSRB through EMMA. The specific nature of the information to be contained in the Annual Report and the notices of listed events are set forth in the form of the Continuing Disclosure Agreement which is included in its entirety in APPENDIX F hereto. SMUD’s covenant will be made in order to assist the Underwriters in complying with Securities and Exchange Commission Rule 15c2-12.

[UPDATE/CONFIRM] [In a limited number of circumstances, certain of the annual reports, audited financial statements or listed event filings required to be made by SMUD during the last five years under its continuing disclosure undertakings were not connected to all of the CUSIP numbers of the bonds subject to the continuing disclosure undertakings. In addition, SMUD entered into two subordinated forward starting interest rate swaps in December 2019 and filed a notice of the interest rate swaps with the MSRB through EMMA in April 2020. A notice of rating upgrade on October 6, 2020, by Moody’s Investors Service of the Northern California Gas Authority No. 1 Gas Project Revenue Bonds, Series 2007B, was also not filed until October 28, 2020.]

RATINGS

Fitch Ratings, Inc. (“Fitch”) and Moody’s Investors Service, Inc. (“Moody’s”) have assigned ratings of “[AA (stable outlook)]” and “[Aa2 (stable outlook)],” respectively, to the 2024 Series N Bonds. Such ratings reflect only the views of such organizations and are not a recommendation to buy, sell or hold the 2024 Series N Bonds. Explanations of the significance of such ratings may be obtained only from the respective rating agencies. SMUD has furnished to Fitch and S&P certain information and materials concerning the 2024 Series N Bonds and itself. Generally, a rating agency bases its rating on the information and materials furnished to it and on investigations, studies and assumptions of its own. There is no assurance that such ratings will continue for any given period or that they will not be revised downward, suspended or withdrawn entirely by the respective rating agencies, if in the judgment of such rating agency, circumstances so warrant. SMUD has not, other than as described under “CONTINUING DISCLOSURE UNDERTAKING” above, and the Underwriters have not undertaken any responsibility either to bring to the attention of the holders or beneficial owners of the 2024 Series N Bonds any proposed revision, suspension or withdrawal of any rating on the 2024 Series N Bonds or to oppose any such proposed revision, suspension or withdrawal. Any such downward revision, suspension or withdrawal of such ratings may have an adverse effect on the market price or marketability of the 2024 Series N Bonds.

[VERIFICATION

Upon delivery of the 2024 Series N Bonds, [] (the “Verification Agent”) will verify, from the information provided to it, the mathematical accuracy as of the date of the closing of the 2024 Series N Bonds of the computations contained in the provided schedules to determine that the anticipated receipts from the securities and cash deposits listed in the Underwriters’ schedules, to be held in escrow, will be sufficient to pay, when due, the interest on and redemption requirements of the Refunded Bonds. The Verification Agent will express no opinion on the assumptions provided to them.]

MISCELLANEOUS

This Official Statement includes descriptions of the terms of the 2024 Series N Bonds, power purchase agreements with certain other parties, pooling and other agreements, the Resolution and certain provisions of the Act. Such descriptions do not purport to be complete, and all such descriptions and references thereto are qualified in their entirety by reference to each such document.

Copies of the Resolution, which forms a contract with the Holders of the 2024 Series N Bonds, will be made available upon request.

This Official Statement has been duly authorized by the Board of Directors of SMUD.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Chief Executive Officer and General Manager

APPENDIX A

INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT

DRAFT

APPENDIX A

**INFORMATION REGARDING
SACRAMENTO MUNICIPAL UTILITY DISTRICT**

TABLE OF CONTENTS

	Page
INTRODUCTION	A-1
General.....	A-1
Independent Governance	A-1
THE SERVICE AREA AND ELECTRIC SYSTEM.....	A-4
The Service Area.....	A-4
The Electric System	A-5
BUSINESS STRATEGY	A-5
General.....	A-5
Serving SMUD’s Customers.....	A-6
Sustainable Power Supply and Transmission	A-8
Electricity, Natural Gas, and Related Hedging.....	A-13
Managing Risks	A-14
Competitive Challenges	A-14
Leveraging Core Competencies	A-14
FACTORS AFFECTING THE REGION	A-16
Precipitation Variability	A-16
Wildfires	A-17
August 2020 Heat Wave	A-19
September 2022 Heat Wave.....	A-19
Storm Damage	A-19
Cosumnes Power Plant Outage.....	A-20
Impacts from COVID-19 Pandemic	A-20
RATES AND CUSTOMER BASE	A-21
Rates and Charges.....	A-21
Rate Stabilization Funds	A-22
Low Income Discount.....	A-23
Rate Comparisons	A-24
Allocation of Revenue by Customer Class	A-26
Customer Base; Largest Customers	A-27
POWER SUPPLY AND TRANSMISSION.....	A-28
Power Supply Resources.....	A-28
Power Generation Facilities.....	A-29
Fuel Supply	A-32
Gas Transmission.....	A-34
Gas Storage	A-35
Power Purchase Agreements.....	A-36
Transmission Service Agreements.....	A-39
Projected Resources	A-40
Demand Side Management Programs.....	A-41
Balancing Authority Area Agreements.....	A-44
Power Pool and Other Agreements.....	A-44
Other Interconnection Agreements	A-45
SELECTED OPERATING DATA.....	A-47

TABLE OF CONTENTS

(continued)

	Page
SELECTED FINANCIAL DATA	A-47
SMUD Financial Information	A-47
Financial Information of SMUD and the Authorities	A-49
Management’s Discussion of SMUD’s Operating Results	A-50
RANCHO SECO DECOMMISSIONING.....	A-51
EMPLOYEE RELATIONS	A-53
RETIREMENT BENEFITS AND POST-EMPLOYMENT MEDICAL BENEFITS	A-53
Pension Plans	A-53
Other Post-Employment Benefits	A-55
CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS	A-56
Estimated Capital Requirements.....	A-56
Outstanding Indebtedness	A-56
INSURANCE.....	A-60
LEGAL PROCEEDINGS	A-60
Environmental Litigation	A-60
Proposition 26 Lawsuit	A-60
Other Litigation Matters	A-61
FERC Administrative Proceedings.....	A-61
CPUC Administrative Proceedings.....	A-61
DEVELOPMENTS IN THE ENERGY SECTOR	A-62
California Electric Market	A-62
Cybersecurity	A-63
Physical Security.....	A-63
Federal Legislation and Regulatory Proceedings.....	A-63
State Legislation and Regulatory Proceedings.....	A-67
Future Regulation	A-74
OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY.....	A-74
CAISO Market Initiatives	A-74
Resource Adequacy Filing.....	A-75
Western Energy Imbalance Market and Extended Day Ahead Market	A-75
Other Factors.....	A-76

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

BOARD OF DIRECTORS

Rosanna Herber, President
Gregg Fishman, Vice President
Brandon Rose
Nancy Bui-Thompson
Rob Kerth
Dave Tamayo
Heidi Sanborn

OFFICERS AND EXECUTIVES

Paul Lau, Chief Executive Officer and General Manager
Frankie McDermott, Chief Operating Officer
Scott Martin, Chief Financial Officer
Brandy Bolden, Chief Customer Officer
Suresh Kotha, Chief Information Officer
Jose Bodipo-Memba, Chief Diversity Officer
Laura Lewis, Chief Legal and Government Affairs Officer and General Counsel
Lora Anguay, Chief Zero Carbon Officer
Farres Everly, Chief Marketing & Communications Officer
Russell Mills, Treasurer
Lisa Limcaco, Controller

INTRODUCTION

General

The Sacramento Municipal Utility District (“SMUD”) owns and operates an electric system that has provided retail electric service since 1946. SMUD’s current service area is approximately 900 square miles, and includes the principal parts of Sacramento County and small portions of Placer and Yolo counties. See “THE SERVICE AREA AND ELECTRIC SYSTEM – The Service Area.”

Independent Governance

SMUD is an independently run community-owned organization. SMUD is not required by law to transfer any portion of its collections from customers to any local government.

SMUD is governed by a Board of Directors (the “Board”), which consists of seven directors elected by ward for staggered four-year terms. The Board determines policy and appoints the Chief Executive Officer and General Manager, who is responsible for SMUD’s overall management and day-to-day operations. The Chief Executive Officer and General Manager is responsible for the hiring and removal of all employees, other than the Chief Legal and Government Affairs Officer and General Counsel, the Internal Auditor and the Special Assistant to the Board, who are hired and may be removed only by the Board. The employment status of nearly all SMUD employees is governed by a civil service system administered by the Chief Executive Officer and General Manager.

The Board elects its President and Vice President annually to take office in January. The current members of the Board are as follows:

<u>Name</u>	<u>Occupation</u>	<u>Ward</u>	<u>Term Expires</u>
Brandon Rose.....	Air Pollution Specialist, California Environmental Protection Agency	Ward 1	December 31, 2024
Nancy Bui-Thompson.....	Chief Information Officer, Wellspace Health	Ward 2	December 31, 2024
Gregg Fishman, Vice-President....	Sr. Community Relations Officer at Sacramento Regional Transit District	Ward 3	December 31, 2026
Rosanna Herber, President.....	Community Engagement Manager	Ward 4	December 31, 2026
Rob Kerth	Business Owner	Ward 5	December 31, 2024
Dave Tamayo.....	Retired Environmental Specialist	Ward 6	December 31, 2026
Heidi Sanborn	Executive Director, National Stewardship Action Council	Ward 7	December 31, 2026

SMUD’s senior management consists of the following executives:

Chief Executive Officer & General Manager. Paul Lau was named Chief Executive Officer and General Manager (“CEO & GM”) of SMUD in October 2020. He reports to the SMUD Board of Directors. As CEO & GM, he leads the sixth largest community-owned electric utility in the nation, serving a population of approximately 1.5 million residents and managing a \$2.1 billion budget. Mr. Lau previously served as SMUD’s Chief Grid Strategy & Operations Officer and has held several other executive leadership positions during his 42-year career at SMUD. He serves on several national and local boards, including the Large Public Power Council, California Municipal Utilities Association, American Public Power Association, and Smart Electric Power Alliance, and as a Commissioner of the Balancing Authority

of Northern California (“BANC”). A registered professional electrical engineer in the State of California (the “State”), Mr. Lau received his bachelor’s degree in electrical power engineering from California State University, Sacramento.

Chief Customer Officer. Brandy Bolden reports to the CEO & GM and oversees SMUD’s Customer and Community Services business unit. She is responsible for customer experience delivery across SMUD’s residential and commercial customer segments. She provides leadership and oversight of customer operations including customer care and revenue management, business intelligence, strategic account management, customer experience and segmentation strategy, channel management, customer program and service delivery, and special assistance. She is also responsible for commercial development and business attraction and oversees Community Energy Services, which provides services and support for community choice aggregators. Since joining SMUD in 2003, Brandy has demonstrated strong leadership and held a variety of senior leadership roles, including leading the Customer & Community Services project management office and the dual role of director of Customer Care and Revenue Operations. Ms. Bolden led the team responsible for implementing time-of-day rates, streamlining the meter-to-cash processes, delivering key billing and payment experience enhancements and recognizing operational efficiencies that resulted in sustained annual savings for SMUD. Ms. Bolden holds a Bachelor of Arts in Sociology from University of California, Davis.

Chief Information Officer. Suresh Kotha reports to the CEO & GM and is responsible for SMUD’s information technology strategy, operations, infrastructure, IT Project Management Office, enterprise innovation process, and cybersecurity. More recently, Mr. Kotha has been leading many technology efforts that are integral to developing a grid of the future that will help SMUD achieve its zero-carbon goal, including its Advanced Distribution Management System, the software platform that supports the full suite of distribution management and optimization, and next-generation network upgrades. Mr. Kotha joined SMUD in 2002 as a principal technical developer, with responsibility for designing and leading implementation and upgrades of multiple technology systems, including the SAP software platform and SMUD’s meter-to-cash systems. He holds a Master of Technology in Computer Science from Jawaharlal Nehru Technology University and a Bachelor of Engineering in Electronics & Communications Engineering from Gulbarga University.

Chief Diversity Officer. Jose Bodipo-Memba reports to the CEO & GM and is responsible for human resources, workforce diversity and inclusion, workforce business planning, SMUD’s Sustainable Communities program, facilities, security and emergency operations. Mr. Bodipo-Memba joined SMUD in 2010 as an environmental specialist and became manager of Environmental Services in 2016. He most recently served as SMUD’s first director of Sustainable Communities. Mr. Bodipo-Memba holds a Bachelor of Arts degree in history from University of California, Berkley and Masters of Business Administration from Drexel University.

Chief Legal & Government Affairs Officer and General Counsel. Laura Lewis was named general counsel for SMUD in April 2014. In this position she serves as chief lawyer and manages SMUD’s legal office and its staff of eight attorneys. She also serves as the secretary to SMUD’s elected board of directors. She reports to the Board and to the CEO & GM and has responsibility for all legal matters in which SMUD is a party to, or has an interest in. Ms. Lewis also oversees SMUD’s government affairs and reliability compliance department. In this capacity, she is responsible for management and coordination of all legislative matters and regulatory requirements affecting SMUD at the state and federal level, including the FERC-NERC electric reliability standards. Ms. Lewis is also responsible for Procurement, Warehouse & Fleet and Energy Trading & Contracts. Ms. Lewis joined SMUD in 1997 as a staff attorney, serving in that capacity through 1999, after which she moved to the San Francisco law firm Davis Wright Tremaine. In 2002, she returned to SMUD as a senior attorney. In 2010, she became assistant general counsel and in 2013 was appointed chief assistant general counsel. She holds a juris doctorate from McGeorge School of

Law, where she won membership in the Order of the Coif honor society. She holds a bachelor's degree in political science from the University of California, San Diego and is a member of the American Bar Association, the Energy Bar Association, and the State Bar of California.

Chief Operating Officer. Frankie McDermott reports to the CEO & GM and is responsible for providing strategic leadership and tactical oversight related to the safe and reliable transmission and delivery of energy to customers, ensuring efficient planning, construction, operation and maintenance of transmission, and distribution facilities. This position has primary responsibility for the processes and functions related to system reliability and operations across SMUD. The Chief Operating Officer is also the safety leader for the enterprise, leader of operational efficiency and responsible for all non-IT capital investments. Prior to this role, Mr. McDermott served as Chief Energy Delivery Officer and Chief Customer Officer, responsible for SMUD's overall retail strategy. From 2010 to 2014, he served as customer services director, which included managing relationships with customer segments as SMUD moved forward with smart-grid technologies. Prior to that, he served as manager of enterprise performance and held positions in supply chain and in general services. Before joining SMUD in 2003, Mr. McDermott served in management roles in the semiconductor industry at NEC Electronics in Roseville, California and in Ireland. After engineering school in Ireland, he earned an MBA from Golden Gate University and completed the Advanced Management Program at the Haas School of Business at the University of California Berkeley.

Chief Zero Carbon Officer. Lora Anguay reports to the CEO & GM and is responsible for leadership oversight of SMUD's Energy Supply which includes SMUD's Power Generation Assets, Resource Planning and Customer and Grid Strategy. This role is also responsible for the delivery of SMUD's plan to provide 100% carbon free energy resources by 2030. This includes obtaining new grants and partnerships, overseeing research and development, designing distributed energy resource programs, enabling processes to settle distributed energy transactions with SMUD's customers and transitioning SMUD's power generation assets and energy contracts to zero carbon resources. Prior to assuming this role, Ms. Anguay was the director of Distribution Operations & Maintenance and was responsible for the day-to-day operations of SMUD's electric distribution grid. Before that she was an engineering designer, process control supervisor, project manager for smart meter deployment, a senior project manager for smart grid distribution automation and supervisor in Grid Assets. Before SMUD, she worked for Oracle Corporation as a finance manager and is a veteran who served in the United States Coast Guard. Ms. Anguay joined SMUD in 2004 and holds a Bachelor of Science degree in business administration from California State University, Sacramento.

Chief Financial Officer. Scott Martin reports to the CEO & GM and is responsible for corporate accounting, treasury operations, risk management, and planning and budgets functions. He is also responsible for strategies across the company and driving prioritization including zero carbon, rates and pricing, enterprise strategic planning and enterprise prioritization. Mr. Martin is a seasoned executive with more than 30 years of experience. Prior to assuming this role, Mr. Martin was SMUD's Chief Strategy Officer. Mr. Martin's previous experience also includes serving as SMUD's customer strategy planning supervisor. Mr. Martin joined SMUD in 1999 and holds a Bachelor of Arts degree in economics from the University of California, Berkeley and a Master of Arts degree in economics from the University of Nevada, Las Vegas.

Chief Marketing & Communications Officer. Farres Everly reports to the CEO & GM and is responsible for all aspects of SMUD's marketing, market research, corporate communications, website, graphic design, video services, data analytics, social media, community engagement, crisis communications, and public affairs activities. Mr. Everly led the creative development and execution of SMUD's numerous award-winning marketing and outreach campaigns and developed the community engagement and communications strategies that resulted in SMUD being ranked number one in California in J.D. Power's annual customer satisfaction surveys and in SMUD becoming the first utility to receive J.D.

Power's Certified Sustainability Leader designation. Prior to joining SMUD, Mr. Everly held marketing and communications management roles at VSP and the Money Store. He holds a bachelor's degree in journalism from California State University, Chico.

Treasurer. Russell Mills reports to the CFO. He oversees all treasury operations, including debt and cash management, banking, financial planning and forecasting, commodity risk management, property and casualty insurance, and is responsible for developing and implementing capital borrowing strategies. Mr. Mills also serves as treasurer for the Transmission Agency of Northern California ("TANC"), the Sacramento Municipal Utility District Financing Authority ("SFA"), the Northern California Gas Authority No. 1 ("NCGA"), the Northern California Energy Authority ("NCEA") and BANC. Before joining SMUD in 2018 as Treasurer, Mr. Mills served as Chief Financial Officer of Southern California Public Power Authority. He also served as the Chief Financial Officer of the Power Supply Program at the California Department of Water Resources ("DWR"). He holds an MBA from Loyola Marymount University, and a bachelor's degree in economics from Towson University in Baltimore, Maryland. Mr. Mills also holds the Energy Risk Professional (ERP) designation and is a CFA level II candidate.

Controller. Lisa Limcaco reports to the CFO and is responsible for accounting and financial reporting at SMUD. Prior to her appointment as controller in 2020, Ms. Limcaco served as an assistant controller, manager of customer value, performance and projects, senior energy commodity specialist and as principal accountant for SMUD's joint powers authorities. Ms. Limcaco also serves as controller for TANC, SFA, NCGA, NCEA and BANC. Before joining SMUD in 2010 as a senior accountant, Ms. Limcaco had 12-years' experience as the Director of Accounting and controller for a food service provider in Sacramento and over 13-years' experience in public accounting including audit manager at Price Waterhouse LLP. Ms. Limcaco holds a bachelor's degree in accounting from the University of Hawaii, a Master of Business Administration from Sacramento State University and is a Certified Public Accountant in the State.

THE SERVICE AREA AND ELECTRIC SYSTEM

The Service Area

SMUD is the primary distributor of electric power within an area of approximately 900 square miles in central California. The service area includes the State Capital, Sacramento, the populous areas principally to the northeast and south of the City of Sacramento (the "City" or "Sacramento") and the agricultural areas to the north and south. The City is located 85 miles northeast of San Francisco.

SMUD's electric system supplies power to a population of approximately 1.5 million with a total annual retail load of approximately 10,104 million kilowatt-hours ("kWh") for the year ended December 31, 2023. As the capital of the nation's most populous state, Sacramento benefits from the historically stabilizing influence of a large government sector. Sacramento is home to the State government headquarters, the Sacramento County seat, the City government and various special districts that combine to make government the largest single employment sector in the Sacramento area. Information technology, transportation, education and health services, leisure and hospitality, and construction round out the other major sectors of employment and industry in the area.

SMUD's annual peak load has averaged 3,045 Megawatts ("MW") over the last three years, with SMUD's record peak load of 3,299 MW occurring on July 24, 2006. In 2022, SMUD recorded its second highest peak load of 3,263 MW. SMUD reviews its load forecast, at a minimum, on an annual basis.

The Electric System

SMUD owns and operates an integrated electric system that includes generation, transmission and distribution facilities.

SMUD supplies power to its bulk power substations through a 230 kilovolt (“kV”) and 115 kV transmission system. This system transmits power from SMUD’s generation plants and interconnects with Pacific Gas & Electric (“PG&E”) and the Western Area Power Administration (“WAPA”). Power is distributed throughout Sacramento County via a 69 kV sub-transmission system with the exception of the City’s downtown area, which is served from the 115 kV transmission system. The downtown area is served from 115/12 kV and 115/21 kV substations. The distribution system serving the remainder of SMUD’s service territory is comprised of 69/12 kV substations with overhead and underground 12 kV distribution circuits.

BUSINESS STRATEGY

General

SMUD’s Board of Directors has established the following purpose and vision statements: “SMUD’s purpose is to enhance the quality of life for our customers and community by providing reliable and affordable electricity, and leading the transition to a clean energy future. SMUD’s vision is to be a trusted and powerful partner in achieving an inclusive, zero carbon economy. SMUD will leverage its relationships to accelerate innovation, ensure energy affordability and reliability, protect the environment, eliminate greenhouse gas emissions, catalyze economic and workforce development, promote environmental justice, and enhance community vitality for all.” The Board has adopted a set of Strategic Directions with related metrics, which it considers essential for the success of SMUD and for serving SMUD’s customers. These include competitive rates, access to credit markets, reliability, customer relations, environmental leadership, resource planning, enterprise risk management and safety. Some of the general elements in SMUD’s business strategy are:

- developing and maintaining a sustainable and reliable power supply to meet demand growth consistent with State mandates and the Board’s directions for renewable energy and the reduction of carbon emissions to zero by 2030. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *2030 Zero Carbon Plan*”;
- working closely with customers to provide the information, tools and incentives to assist them to more efficiently manage energy use, which will contribute to meeting greenhouse gas (“GHG”) emission targets and managing needle peak demand requirements (those 40 or so hours of the year with extreme temperatures when customer demand surges by up to 400 additional MW);
- managing price, volumetric and credit risks associated with energy and natural gas procurement;
- attracting, developing and retaining a diverse, skilled and engaged workforce that reflects SMUD’s values and is committed to achieving SMUD’s mission;
- retaining local decision making authority and operational independence; and
- collaborating regionally to attract new businesses and grow existing business to diversify and strengthen the Sacramento economy.

SMUD’s long-range business strategy focuses in part on ensuring financial stability by establishing rates that provide an acceptable fixed charge coverage ratio on a consolidated basis, taking into consideration the impact of capital expenditures and other factors on cash flow. SMUD’s Board policy sets

a minimum fixed charge coverage ratio of 1.50 times for annual budgets, though it generally plans to meet a minimum fixed charge coverage ratio of 1.70 times. Over the past ten years, the actual fixed charge coverage ratio has averaged 2.10 times on a consolidated basis. SMUD also manages its liquidity position by planning for a minimum of 150 days cash on hand and planning to maintain at least \$150 million of available capacity under its commercial paper and line of credit program. SMUD's commercial paper and line of credit program is currently authorized for \$500 million aggregate principal amount outstanding at any one time. As of March 21, 2024, SMUD had \$150 million aggregate principal amount of its commercial paper notes outstanding and \$350 million of the authorized aggregate principal amount of its commercial paper and line of credit program available for use. SMUD uses cash on hand and commercial paper and a line of credit to fund capital expenditures, then issues debt to reimburse itself for cash expended for qualified capital expenditures and/or to pay down the outstanding principal amount of its commercial paper program and line of credit. Over the past ten years, the days cash on hand has averaged 216. The resolutions securing SMUD's Senior Bonds and Subordinated Bonds (each as defined under the caption "CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS" below) do not require SMUD to maintain a minimum fixed charge coverage ratio, minimum days cash on hand or minimum available capacity under its commercial paper program and line of credit.

In addition, SMUD's business strategy focuses on servicing its customers in a progressive, forward-looking manner, addressing current regulatory and legislative issues and potential competitive forces.

Serving SMUD's Customers

SMUD continually looks for ways to better serve and partner with its customers to further strengthen customer loyalty, while providing competitive and fair pricing for SMUD's electric services. SMUD also has a focused effort to assist and incentivize customers to manage energy use more efficiently, which will contribute to meeting GHG emission targets and managing peak demand requirements as noted below.

Digital Enhancements. Customers are increasingly turning to digital channels including SMUD's mobile application, SMUD.org, e-mail and social media to interact and do business with SMUD. SMUD has delivered many digital enhancements, including bill pay functionality; online payment arrangements; start/stop/transfer move service; view of energy usage, chat, an enhanced outage map including meter test functionality; and the SMUD Energy Store, which is an online marketplace for energy-related products. SMUD plans to continue efforts to provide more personalized digital customer experiences.

Advanced Metering, Infrastructure and Rate Design. As a community-owned organization, SMUD is dedicated to providing the tools and transparency in customer energy usage to enable customers to easily and positively affect energy usage, energy cost, and climate change. In 2012 SMUD installed smart technology, including 617,000 digital communicating smart meters, distribution automation systems and equipment to facilitate load management. The advanced technology has allowed SMUD to deliver tools such as text and e-mail bill alerts and online energy usage comparison charts to help customers manage energy use. SMUD has leveraged smart grid investments to improve reliability, reduce losses, reduce power quality issues and improve customer service through better, more timely information.

Time-of-Day Rates. On June 15, 2017, the Board approved time-of-day ("TOD") rates as the standard rate for residential customers. The residential rate transition began in the fourth quarter of 2018 and was completed in the fourth quarter of 2019.

All of SMUD's business customers are also on time-based rates. On June 24, 2019, the Board approved an update to the commercial TOD rates to improve consistency and better align commercial rates

with current energy market prices. The transition was completed in the first quarter of 2022. See “RATES AND CUSTOMER BASE – Rates and Charges.”

Renewable Options. SMUD’s customers have been increasingly interested in distributed energy resources, mainly through the installation of solar systems. As of December 2023, approximately 51,374 of SMUD’s residential and commercial customers, approximately 8% of retail customers, had installed solar systems, representing approximately 360 MW of solar installations.

As the cost of energy storage continues to decline, SMUD anticipates an increase in behind-the-meter energy storage, mainly through the installation of battery storage systems. As of December 2023, approximately 1,532 of SMUD’s residential and commercial customers, approximately 0.2% of retail customers, had installed storage systems, representing approximately 10 MW of storage.

As another option for solar, SMUD’s SolarShares® pilot program (the “SolarShares Pilot”) was established as a cost-effective and convenient way for commercial customers to meet their energy needs from solar power. The SolarShares Pilot offered SMUD commercial customers the opportunity to receive solar power without upfront costs or equipment installation through 5-, 10- or 20-year purchase contracts. Customers that entered into purchase contracts under the SolarShares Pilot receive up to half of their power from a utility-scale solar system. SMUD supplies solar power for the SolarShares Pilot either by building and maintaining utility-scale solar systems or by procuring solar power from third parties through power purchase agreements. The SolarShares Pilot generation was approximately 3.2% of retail sales in 2023. As of April 30, 2021, SMUD had completed the SolarShares Pilot and is not entering into new purchase contracts under the SolarShares Pilot.

Since January 2020, the California Building Code has required all newly constructed residential buildings under three stories to be powered by photovoltaic solar systems. A new home satisfies this requirement if it installs on-site solar or participates in an approved community solar or energy storage program. In February 2020, SMUD obtained approval from the California Energy Commission (“CEC”) to administer its own community solar program, called Neighborhood SolarShares® (“Neighborhood SolarShares”). SMUD’s Neighborhood SolarShares program can be used by developers of new low-rise residential buildings to satisfy the mandatory solar requirement. See also “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Rooftop Solar Mandate*.” Starting in 2023, the California Building Code’s mandatory solar requirement extends beyond low-rise residential properties, and other changes to the California Building Code’s community solar regulations took effect. SMUD revised its program to align with the new regulations and, in May 2023, obtained approval from the CEC to continue offering its Neighborhood SolarShares compliance option to newly constructed low rise residential homes in its service territory.

In addition to the SolarShares Pilot and Neighborhood SolarShares, SMUD maintains a voluntary green energy pricing program called Greenergy® (“Greenergy”). The Greenergy program allows customers the opportunity to pay an additional amount per month to ensure that either all or part of their electricity comes from green or carbon free energy sources. In 2023, the program allocated Renewable Energy Credits (“RECs”) equivalent to approximately 4.2% of retail sales to its participating customers.

Energy Efficiency. To further assist customers in managing energy usage and reducing regional carbon emissions and air pollution, SMUD offers an extensive array of energy efficiency and building electrification programs and services including financial incentives, loans, energy audits and education. In addition, SMUD has partnered with local developers to incorporate energy efficiency and all-electric construction measures into new residential and commercial construction, which helps developers plan and design efficient, cost-effective and low or zero-emission buildings. As part of SMUD’s 2019 Integrated Resource Plan (“IRP”), SMUD set a goal for regional carbon emissions through transport and building

electrification that aims to reduce carbon emissions in buildings and transport by 64% over the next 20 years. SMUD’s focus on electrification is continued in the Zero Carbon Plan (defined and discussed below). SMUD was the first electric utility in the country to set its efficiency goals based on carbon reductions, allowing building electrification and energy efficiency to both count toward meeting SMUD’s efficiency goals. This is a significant opportunity, as converting a typical home today to all-electric saves more than three times the carbon emissions compared to doing a major energy efficiency upgrade alone to the same building. See “POWER SUPPLY AND TRANSMISSION – Projected Resources.”

Sustainable Power Supply and Transmission

Maintaining a sustainable power supply entails focusing efforts on researching, promoting and implementing new renewable energy technologies and sources to meet SMUD’s long-term commitment to reducing carbon emissions and providing a reliable energy supply. SMUD defines a sustainable power supply as one that reduces SMUD’s GHG emissions to serve retail customer load to zero by 2030. See “– 2030 Zero Carbon Plan” below. SMUD is planning to achieve zero GHG emissions to serve retail customer load through investments in energy efficiency, clean distributed energy resources, renewables portfolio standard (“RPS”) eligible renewables, energy storage, large hydroelectric generation, clean and emissions free fuels, carbon capture and sequestration, and new technologies and business models. Additionally, SMUD plans to continue pursuing GHG emissions reductions through vehicle, building and equipment electrification. At the same time, SMUD’s plans for maintaining a sustainable power supply include assuring the reliability of SMUD’s electric system, minimizing environmental impacts on land, habitat, water and air quality, and maintaining competitive rates relative to other electricity providers in the State.

A number of bills affecting the electric utility industry have been enacted by the State Legislature. In general, these bills regulate GHG emissions and encourage greater investment in energy efficiency and sustainable generation alternatives, principally through more stringent RPS. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings” herein.

2030 Zero Carbon Plan. In July 2020, the Board declared a climate emergency and adopted a resolution calling for SMUD to take significant and consequential actions to reduce its carbon footprint by 2030. On April 28, 2021, the Board approved SMUD’s 2030 Zero Carbon Plan (the “Zero Carbon Plan”). The Zero Carbon Plan is intended to be a flexible roadmap for SMUD to eliminate carbon emissions from its electricity production by 2030 while maintaining reliable and affordable service. To achieve these goals the Zero Carbon Plan is focused on four main areas: natural gas generation repurposing, proven clean technologies, new technologies and business models and financial impacts and options. SMUD plans to revisit the Zero Carbon Plan annually.

The natural gas generation repurposing focus of the Zero Carbon Plan calls for exploring the replacement of two of SMUD’s five Local Gas-Fired Plants (as defined herein) and the retooling of the other three Local Gas-Fired Plants. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Local Gas-Fired Plants.*” Based on SMUD’s studies to date, SMUD estimates that McClellan (as defined herein) and the Campbell Soup Project (as defined herein) can be replaced in the next several years depending on SMUD’s success with replacement resources. Final decisions about the replacement of these two Local Gas-Fired Plants will be based on additional reliability studies and engagement with the community. As part of the Zero Carbon Plan, SMUD is also exploring converting the Carson Project (as defined herein) and the Procter & Gamble Project (as defined herein) to reliability use operations only and investigating the use of alternative fuels like Renewable Natural Gas-biomethane (RNG-biomethane), hydrogen and other biofuels for the Carson Project, the Procter & Gamble Project, and the Consumnes Power Plant (as defined herein). In addition, SMUD is investigating new technologies such as long duration energy storage, carbon capture and sequestration, hydrogen and other clean fuel alternatives to help support

the reduction of GHG emissions in SMUD’s energy supply. All final generator configurations are subject to reliability assessments.

The proven clean technologies focus of the Zero Carbon Plan calls for SMUD to procure approximately 1,100 to 1,500 MW of utility-scale solar photovoltaic (“PV”) generating capacity, 700 to 1,100 MW of local utility-scale battery storage, 300 to 500 MW of wind generating capacity, and 100 to 220 MW of geothermal generating capacity. The Zero Carbon Plan also estimates that customer installation of approximately 500 to 750 MW of behind-the-meter solar PV generating capacity and approximately 50 to 250 MW of behind-the-meter battery storage will assist SMUD with achieving the Zero Carbon Plan goals.

With respect to new technologies and business models, the Zero Carbon Plan focuses on evaluating, prioritizing and scaling the emerging technologies that SMUD expects will have the largest impact on reducing carbon in SMUD’s 2030 resource mix. SMUD is currently focused on various areas of technology and customer-focused programs, including electrification, education, demand flexibility, virtual power plants, vehicle-to-grid technology, and new grid-scale technologies. The Zero Carbon Plan forecasts that customer-owned devices and SMUD customer-focused programs will contribute between 360 and 1,300 MW of capacity to SMUD’s grid by 2030.

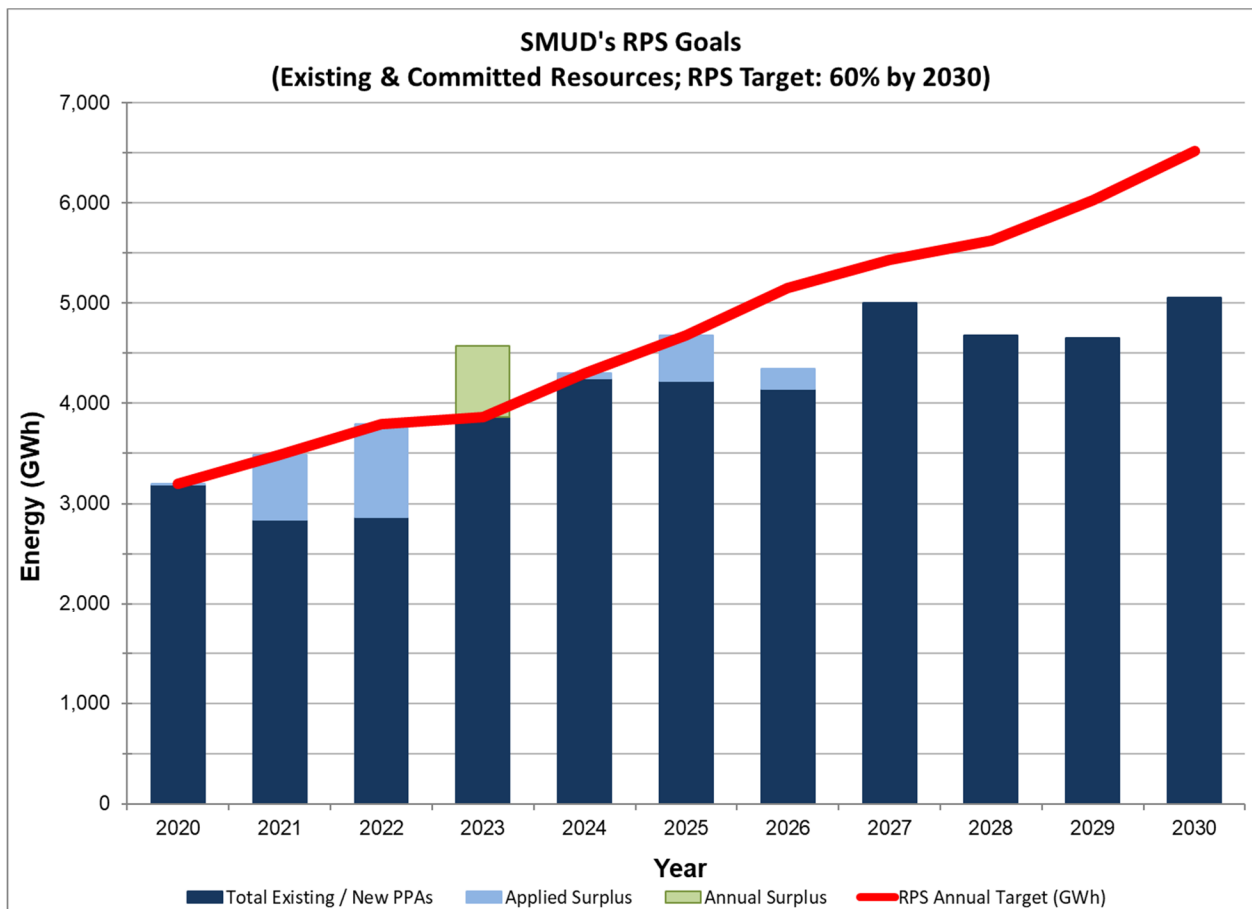
The financial impacts and options focus of the Zero Carbon Plan aims to keep SMUD rate increases at or below the rate of inflation while achieving SMUD’s goal of eliminating carbon emissions from its power supply by 2030. To pay for the expected costs of the Zero Carbon Plan and keep rate increases at or below the rate of inflation, the Zero Carbon Plan estimates the need for SMUD to realize between \$50 million and \$150 million of sustained annual savings. SMUD currently plans to achieve these sustained annual savings by exploring the implementation of operational savings strategies and pursuing partnership and grant opportunities.

While the ultimate impacts of the Zero Carbon Plan on SMUD’s financial results and operations are difficult to predict and are dependent on a variety of factors, such as the relative cost of procuring energy from clean technologies, the availability and relative cost of new technologies, and the adoption and implementation of energy efficiency and other measures by SMUD’s customers, such impacts could be material.

Renewable Energy and Climate Change. The California Renewable Energy Resources Act, established by Senate Bill X1-2 (“SBX1-2”) and the Clean Energy and Pollution Reduction Act of 2015, enacted by Senate Bill 350 (“SB 350”) require that SMUD meets 33% of its retail sales from RPS-eligible renewable resources by 2020 and 50% of its retail sales from RPS-eligible renewable resources by 2030. Senate Bill 100 (“SB 100”), passed by the legislature and approved by then-Governor Brown on September 10, 2018, accelerates the RPS targets and establishes a new 60% target by 2030. The bill also created a planning goal to meet all of the State’s retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Renewables Portfolio Standards*” for a discussion of the State RPS requirements.

SMUD’s compliance with State RPS requirements is evaluated over 3- or 4-year compliance periods. SMUD met the State RPS requirements for the first compliance period (2011-2013) and second compliance period (2014-2016). The third compliance period (2017-2020) required SMUD to source one-third of its energy from renewable resources, and SMUD had sufficient RECs to meet the third compliance period requirements. SMUD filed its 2020 and third compliance period RPS compliance report with the CEC in the second quarter of 2021 and the CEC adopted SMUD’s third compliance period verification report in December 2023. SMUD expects the confirmation letter from the CEC indicating that SMUD was

in full compliance with its third compliance period RPS obligations in the first quarter of 2024. As of the end of the third compliance period (2020), SMUD had approximately one million surplus RECs available to help meet future RPS targets. SMUD expects to file its 2023 RPS compliance report by July 1, 2024, showing that SMUD will have provided approximately 50% of its retail sales from RPS-eligible renewable resources in 2023, which is greater than the interim 2023 RPS target of 41.25%. RPS compliance is determined by compliance period and not by individual years and SMUD anticipates having sufficient surplus procured and/or under contract resources in the fourth compliance period (2021-2024) to be in compliance with the RPS requirements. In addition to meeting RPS standards, SMUD serves an additional 7.4% of its customer load with renewable energy through its voluntary SolarShares and Greenergy pricing programs described above. SMUD estimates that it has sufficient renewable energy deliveries, new power supply contract commitments, new power supply commitments under active discussion, and RPS-eligible surplus carryover to meet its RPS requirements through 2025. Additional resources have been identified that are expected to provide sufficient RPS-eligible resources to cover most of SMUD’s RPS requirements through 2030. Future solicitations may be needed to fill any remaining gaps. The following chart illustrates SMUD’s current RPS requirements through 2030 and its existing and committed resources utilized to meet those requirements.



In addition to procuring new sources, meeting the RPS requirements will require replacement of certain existing renewable contracts which expire in future years. While SMUD anticipates it will meet much of its renewable resource requirements through purchase contracts with third parties, it continues to explore additional options, including wind, solar, biomass, and geothermal developments, partnering with other utilities on future projects, and local development options. SMUD's resource forecast (see "POWER SUPPLY AND TRANSMISSION – Projected Resources") accounts for future renewable resources as a component of "Uncommitted Purchases." To meet SMUD's Zero Carbon Plan goals, SMUD anticipates meeting loads in 2030 with approximately 70-80% renewable resources, in addition to hydro and other new zero carbon technologies. See "– 2030 Zero Carbon Plan" above.

Given the intermittent nature of power from renewable resources such as wind and solar, SMUD is exploring and investing in options that provide the flexibility to manage the intermittency of such renewable resources. Potential options include energy storage resources, which SMUD has committed to as part of the Zero Carbon Plan, and expanding load management resources. Additionally, on April 3, 2019, SMUD, through its membership in BANC, a joint exercise of powers agency formed in 2009, and currently comprised of SMUD, the Modesto Irrigation District ("MID"), the City of Roseville ("Roseville"), the City of Redding ("Redding"), the City of Shasta Lake and the Trinity Public Utilities District, commenced participation in the California Independent System Operator Corporation ("CAISO") western energy imbalance market ("WEIM"). Participation in the WEIM benefits SMUD by providing it with broader access to balancing resources within the region to help manage its expanding renewable portfolio. In addition, other entities within the BANC Balancing Authority Area began participation in the WEIM on March 25, 2021. See "BUSINESS STRATEGY – Serving SMUD's Customers – *Operational Independence and Local Control*" and "POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements."

In 2022, SMUD's Board formally adopted the 2030 Zero Carbon Plan as SMUD's updated IRP. SMUD filed the approved IRP update with the CEC on September 14, 2022, pursuant to the CEC's IRP guidelines, which called for updating SMUD's IRP filing within five years of SMUD's previous filing of April 29, 2019. SMUD's Zero Carbon Plan built upon the April 2019 IRP and set a goal of zero carbon emissions by 2030. SMUD's next formal IRP process is expected to be completed and filed with the CEC in 2027. See "BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *2030 Zero Carbon Plan*."

The State's carbon cap-and-trade market established pursuant to Assembly Bill 32 ("AB 32") began in 2013. See "DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Greenhouse Gas Emissions*" for a discussion of AB 32 and the State's cap-and-trade program. SMUD anticipates that allowances allocated to SMUD will nearly equal SMUD's compliance obligations under normal water year conditions. Under low water year conditions, SMUD may need to purchase additional allowances to cover its compliance obligations, including carbon obligations related to wholesale energy sales from SMUD's natural gas power plants. As SMUD implements its clean power goals, SMUD expects its need for these allowances to decline.

There is scientific consensus that increasing concentrations of GHG have caused and will continue to cause a rise in temperatures in the State and around the world. The change in the earth's average atmospheric temperature, generally referred to as "climate change," is, among other things, expected to result in a wide range of changes in climate patterns, including increases in the frequency and severity of extreme weather events, including droughts and heat waves, more frequent incidences of wildfires, changes in wind patterns, sea level rise and flooding, any of which alone or in combination could materially adversely affect SMUD's financial results or operations. See also "FACTORS AFFECTING THE REGION" and "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY – Other Factors." As described above, SMUD is actively working to meet its sustainable power supply goals,

reduce its own GHG emissions, and assist the local governments in the territory it serves with their desired GHG reductions. In 2016, SMUD introduced the Pilot Natural Refrigerant Incentive Program, its first customer program providing incentives for GHG reduction in addition to kWh savings. SMUD is a founding member and active participant in the Capital Region Climate Readiness Collaborative, a public private partnership formed to better understand and plan for climate impacts expected in the region. SMUD is also an active member of the United States Department of Energy (the “DOE”) Partnership for Energy Sector Climate Resilience. SMUD regularly reviews scientific findings related to climate change and in 2016 published its Climate Readiness Assessment and Action Plan. In 2024, SMUD is planning to update the Climate Readiness Assessment and Action Plan along with other climate resiliency actions.

Energy Storage Systems. Assembly Bill 2514 (“AB 2514”) requires the Board to re-evaluate energy storage goals every three years. In compliance with AB 2514, the Board established a target of 9 MW of energy storage procurement by December 31, 2020, which SMUD has procured. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Energy Storage Systems*” for further discussion of AB 2514. In September 2020, the Board directed that energy storage forecasts be implemented through SMUD’s IRP process going forward. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*” above for a discussion of SMUD’s IRP. SMUD is also evaluating how to couple utility-scale solar with utility-scale storage to support future system reliability needs and renewable energy goals.

Meeting Peak Load. A significant consideration for SMUD will be how it addresses its system peak load. SMUD has implemented programs and tools, such as advanced metering, energy efficiency options, and TOD rates for residential customers, to help customers manage their costs while helping SMUD reduce its peak load. Analysis of 2022 data showed a reduction of approximately 108 MW, weather adjusted, for residential customers during the TOD peak period (5-8 p.m. local time). SMUD staff will continue to monitor the progress and results of the implementation of TOD rates and will use this information to inform future rate actions and load forecasts. See “BUSINESS STRATEGY – Serving SMUD’s Customers – *Time-of-Day Rates.*”

On September 16, 2021, the Board approved an optional residential Critical Peak Pricing rate (the “Peak Pricing Rate”), which went into effect June 1, 2022. The Peak Pricing Rate is designed to reduce load by increasing the price of energy when the grid is most impacted, up to 50 hours per summer. In exchange, customers on the rate will receive a per kWh discount on summer Off-Peak and Mid-Peak rates. SMUD is also exploring the use of more distributed energy resources and demand response programs that could further reduce SMUD’s system peak.

Operational Independence and Local Control. A key component of SMUD’s business strategy is focused on maintaining its independence in operating and maintaining its resources. As such, SMUD has taken a number of actions to mitigate the potential impacts of various federal and state regulatory actions. For example, in 2002 SMUD established itself as an independent control area (now termed “Balancing Authority”) within the Western Electricity Coordinating Council (“WECC”) region. By removing itself from CAISO’s Balancing Authority area, SMUD became responsible for balancing electric supply and demand within its own service territory. This move substantially reduced fees paid to CAISO, preserved operational flexibility and helped to insulate SMUD from the uncertain regulatory environment and tariff structure of CAISO. In addition to decreased financial risks, this independence also reduced SMUD’s exposure to the impacts of capacity and energy shortages in the CAISO Balancing Authority area. Further, as an independent Balancing Authority, SMUD continued to support the statewide electric grid in events of electrical emergencies requiring rotating outages, such as loss of major transmission lines or equipment, as provided in the statewide emergency plan. By 2006, the SMUD Balancing Authority footprint expanded north to the California-Oregon border and south to Modesto, to include the service areas of the WAPA, MID, Redding and Roseville, and TANC-owned 340-mile 500-kV California-Oregon Transmission Project

(“COTP”). In October 2009, SMUD, with the coordination and cooperation of WAPA, joined the Western Power Pool Reserve Sharing Group, which supports reliability and reduces operating costs. In May 2011, BANC assumed the role of the Balancing Authority, though SMUD continues to oversee operation of the grid on behalf of BANC. BANC members share cost responsibility for balancing authority-related compliance obligations, liabilities, and operations. BANC also serves as an important venue for SMUD and other BANC members to collaborate with respect to operational and market improvements inside the BANC footprint and to preserve their operational independence. See “POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.” On April 3, 2019, SMUD, through its participation in BANC, began operating in the CAISO WEIM, which helps SMUD better manage the integration of renewable energy resources. The CAISO WEIM is a voluntary market, which allows SMUD to maintain its operational independence from the CAISO, while providing SMUD greater access to balancing resources throughout the western region. See “POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.”

Electricity, Natural Gas, and Related Hedging

SMUD continues to utilize a comprehensive and integrated power and fuel supply strategy to acquire a reliable and diversified portfolio of resources to meet existing and future needs. This strategy includes a combination of both physical supply and financial hedging transactions to reduce price risk exposure over a five-year horizon. SMUD’s physical supply arrangements include ownership of power generating resources, as well as a diversified portfolio of power and fuel supply purchase contracts that range in duration, with a mixture of fixed and variable pricing terms.

With regard to the power purchase contracts, SMUD has entered into a series of contracts for the purchase of electricity to supply the portion of its resource needs not already provided by owned resources. SMUD also actively manages its exposure on variable rate electricity purchases, and at times may enter into financial contracts to fix prices by using options to reduce price risk, in each case when warranted by economic conditions. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements.”

With regard to fuel supply contracts, SMUD utilizes a similar strategy of employing financial contracts of various durations to hedge its variable rate fuel supply contracts. As of February 29, 2024, these contracts are forecasted to have hedged the price exposure on approximately 100%, 82% and 81% of SMUD’s anticipated natural gas requirements for 2024, 2025 and 2026, respectively. While the financial effects resulting from the unhedged portions of SMUD’s natural gas requirements are difficult to predict, SMUD’s financial results could be materially impacted. See “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Supply*.”

As provided in SMUD’s natural gas contracts, SMUD may be required to post collateral to various counterparties. As of February 29, 2024, SMUD did not have any collateral posting obligations. A decrease in natural gas prices could result in a collateral posting by SMUD. While the posting of collateral is not an expense for SMUD, it does temporarily encumber unrestricted cash balances.

To hedge against hydroelectric production volatility of SMUD-owned hydroelectric facilities, SMUD implemented a pass-through rate component called the Hydro Generation Adjustment (the “HGA”), and established a Hydro Rate Stabilization Fund (the “HRSF”). Similarly, to hedge against hydroelectric production volatility of non-SMUD-owned hydroelectric facilities, SMUD implemented a HGA and established a WAPA Rate Stabilization Fund (“WRSF”). These rate stabilization funds and rate pass through mechanisms help to offset increased power supply or fuel supply costs in years where precipitation levels at SMUD-owned and non-SMUD-owned hydroelectric facilities are low. See “RATES AND CUSTOMER BASE – Rate Stabilization Funds.”

Managing Risks

SMUD maintains an Enterprise Risk Management (“ERM”) program, a strategic approach to managing enterprise-wide risks as a portfolio, to help reduce the chance of loss, create greater financial stability and protect SMUD resources. It is designed to maintain an early warning system to monitor changes in, and the emergence of, risks that affect the organization’s business objectives. Under the purview of the Enterprise Risk Oversight Committee, composed of executive members and chaired by the Chief Financial Officer, ERM conducts ongoing risk identification, assessments, monitoring, mitigation, risk-based budgeting and reporting. To ensure accountability and oversight, each identified risk is assigned to an executive-level risk owner. Risk status and mitigation efforts are reported monthly to the Board.

Competitive Challenges

In the coming decade, utilities like SMUD may face competition from companies in other industries looking to diversify into the energy sector. Examples of developing competitive areas include retail sale of electricity, distributed electric storage resources, renewable distributed generation (mostly solar in Sacramento), customer installation of fuel cells, third-party electric vehicle charging, home or business automation that enables greater customer participation in energy markets, and third-party provision of energy management software and solutions.

SMUD has a wide range of initiatives to monitor and adapt to changing market conditions and new industry participants. Key areas of focus include:

- Enhancing customer experience. Recognizing the importance of meeting customer expectations, SMUD introduced the Customer Experience Strategy in 2016 to provide customers “value for what they pay” and further strengthen customer loyalty. The initiative is focused on ensuring SMUD has the people, systems, technology, programs and services to consistently meet or exceed customers’ changing expectations. The customer experience is measured via surveys with the goal of achieving 80% of customers agreeing that SMUD provides them with value for what they pay by 2030.
- Restructuring electric rates. In 2017, the Board approved TOD rates as the standard rate for residential customers. The residential rate transition began in the fourth quarter of 2018, and the full transition was completed in the fourth quarter of 2019. All of SMUD’s business customers are also on time-based rates. In 2019, the Board approved a restructuring of commercial rates to collect a greater portion of fixed costs through fixed charges and to better align time periods and prices with energy markets. The transition was completed in the first quarter of 2022. See “RATES AND CUSTOMER BASE – Rates and Charges” and “FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic.”
- Ongoing integrated resource planning. SMUD monitors and updates its integrated resource planning to ensure future sources of energy balance cost, reliability and environmental requirements with the flexibility to meet challenges of changing market and regulatory conditions, customer energy resources, and emerging technologies.

Leveraging Core Competencies

In addition to these initiatives, SMUD is leveraging core competencies to improve industry safety and help communities serve their customers’ energy needs.

Sacramento Power Academy. The Sacramento Power Academy is SMUD’s operational training center providing training support for all of SMUD’s skilled trades professionals. Operating on a 10-acre training facility the academy oversees SMUD’s 14 skilled trades apprenticeships. The academy’s experienced training professionals serve as liaisons and mentors to apprentices progressing through on-the-job training, program testing, night schooling, and extensive training components. The academy also ensures SMUD’s skilled trades professionals are safe and compliant by coordinating and delivering annual regulatory and safety training. The academy is also a workforce development hub utilized by SMUD to increase awareness of and interest in skilled trades careers at SMUD, in SMUD’s community, and in the utility industry.

Community Energy Services. In 2002, Assembly Bill 117 was passed to establish Community Choice Aggregation in the State by authorizing Community Choice Aggregators (“CCAs”) to aggregate customer electric load and purchase electricity for customers. SMUD’s Community Energy Services department was established in 2017 to support organizations with values closely aligned with SMUD’s values, while also generating additional revenue for SMUD. CCA programs are proliferating in the State thanks to support for expanding renewable energy use and desire for local control particularly for electricity procurement. There are numerous CCAs operating in the State, and more are anticipated to launch in the future. CCAs are responsible for procuring wholesale power, setting the generation rate, and staffing a call center to handle opt-outs and questions about the power portfolio. The local investor-owned utility (“IOU”) continues to deliver electricity from the electric grid, maintain its electric infrastructure, bill customers and collect payments.

In October 2017, SMUD was selected by the governing board of Valley Clean Energy (“VCE”) to provide technical, energy and support services, including data management and call center services, wholesale energy services, and business operations support, to VCE for a five-year term expiring May 31, 2023. SMUD and VCE recently executed a new contract for data management, contact center, consulting and debt collection services that expires on December 31, 2028. VCE is a joint powers agency formed in 2016 by the City of Woodland, the City of Davis and Yolo County to implement a local CCA program. The service territory expanded to include the City of Winters in 2021. The mission of VCE is to deliver cost-competitive clean electricity, product choice, price stability, energy efficiency, and greenhouse gas emissions reductions to its customers in Yolo County. VCE began electric services to its customers in the summer of 2018, giving Yolo County residents a choice between two electricity providers, VCE and PG&E.

In November 2017, SMUD was selected by the governing board of East Bay Community Energy (“EBCE”) to provide call center and data management services for a three-year term beginning in January 2018. SMUD signed a new contract with EBCE in January 2022 for call center and data management services for an additional three-year term. EBCE recently changed its name to Ava Community Energy (“Ava”). Ava is a joint powers agency formed in 2016 by the cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Oakland, Piedmont, San Leandro and Union City in Alameda County to implement a local CCA program. Ava expanded its territory to the cities of Pleasanton, Newark, and Tracy in April 2021.

In June 2019, SMUD was selected by the governing board of Silicon Valley Clean Energy (“SVCE”) to provide program services to help local SVCE communities reduce carbon pollution while delivering engaging customer experiences. SVCE programs are focused on grid integration, as well as electrifying transportation, buildings and homes. This contract was extended through September of 2024. In June 2023, SMUD was selected through a competitive process as SVCE’s concierge service vendor for three years. In December 2023, SMUD was again selected through a competitive process as SVCE’s programs administrator for five years. SVCE is a joint powers agency formed in 2016 by the cities of Campbell, Cupertino, Gilroy, Lost Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill,

Mountain View, Saratoga, Sunnyvale and Unincorporated Santa Clara County to implement a local CCA program.

In July 2022, SMUD was selected by the governing board of Marin Clean Energy (“MCE”) to provide data management, billing, data analytic and system assessment services to MCE. MCE is a joint powers agency formed in 2010 and represents 37 member communities across four Bay Area counties: Contra Costa, Marin, Napa and Solano.

In September 2022, SMUD was selected through a competitive process by the governing board of Sonoma Clean Power (“SCP”) to provide market research services to SCP. In January of 2023, SMUD was selected to provide strategic consulting services, providing recommendations related to programs and marketing. SCP is a joint powers agency that serves Sonoma and Mendocino counties.

While CCAs have had success in the State, they are susceptible to business, regulatory and other risks that could lead to a financial loss and/or result in a cessation of operations for the CCA. These risks could extend to a CCA’s counterparties, including SMUD. SMUD has made an effort to identify and mitigate potential counterparty risks to the extent possible in service agreements with the CCAs described above. SMUD may pursue opportunities to provide similar services to additional CCAs in the future. SMUD management does not expect its current arrangements to have a material adverse impact on SMUD’s financial position, liquidity or results of operations.

FACTORS AFFECTING THE REGION

Precipitation Variability

SMUD uses a precipitation measuring station located at Fresh Pond, California to approximate available water supply to SMUD’s Upper American River Project (the “UARP”) hydropower reservoirs. As of January 31, 2024, precipitation at Fresh Pond, California totaled 21 inches for the October-September hydropower water supply period. This is 75% of the 50-year rolling median of 28 inches. Total reservoir storage in the UARP hydropower reservoirs was 238 thousand acre-feet as of January 31, 2024, which was about 63% of capacity and approximately 6% above the historical average. SMUD manages its reservoirs to maximize water storage going into the summer season, which preserves generating capacity during SMUD’s high load months and ensures that SMUD meets its UARP FERC license requirements, including requirements for recreational and environmental flows.

There can be wide swings in precipitation from year to year. In years with below average rainfall, SMUD may have to generate or purchase replacement energy at additional cost. To hedge against variations in the volume of energy received from SMUD-owned UARP hydroelectric resources, SMUD uses the HRSF to help offset increased power supply or fuel supply costs. See “RATES AND CUSTOMER BASE – Rate Stabilization Funds.”

SMUD is also exposed to precipitation variability through its contract with the WAPA. In an average water year this contract provides roughly 661 gigawatt hours (“GWh”) of power. WAPA’s actual deliveries are based on hydroelectric generation (minus energy use for pumping) at Central Valley Project reservoirs in Northern California, which varies based on annual precipitation patterns, water deliveries for agriculture, and flow requirements in the Sacramento-San Joaquin River Delta. Unlike the UARP, SMUD does not monitor precipitation stations to approximate power deliveries under the WAPA contract, and instead relies on a forecast of power deliveries from WAPA. As of January 31, 2024, WAPA has forecasted power deliveries of 703 GWh for 2024, approximately 6% more than an average water year. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – *Western Area Power Administration.*”

Wildfires

General. Wildfires in the State have become increasingly common and destructive. Frequent drought conditions and unseasonably warm temperatures have increased, and could further increase, the possibility of wildfires occurring in areas where SMUD maintains generation, transmission and distribution facilities. The number of diseased and dead trees has increased, and could further increase, this possibility. As a result, SMUD faces an increased risk that it may be required to pay for wildfire related property damage or personal injuries, fines and penalties, some of which may not be covered by insurance (including costs in excess of applicable policy limits), or may be disputed by insurers, and could be material. In addition, a significant fire or fires in SMUD’s generation, transmission or service area could result in damage or destruction to SMUD’s facilities, result in a temporary or permanent loss of customers or otherwise materially increase SMUD’s costs or materially adversely affect SMUD’s ability to operate its Electric System or generate revenues.

SMUD’s service territory is located within Sacramento County, which is located outside the California Public Utilities Commission (the “CPUC”) high fire threat areas established in 2018. However, as described below, SMUD’s UARP facilities and certain of SMUD’s and TANC’s transmission facilities are within CPUC high fire threat areas. In addition, as described below, certain portions of SMUD’s service territory are located within the California Department of Forestry and Fire Protection (“Cal Fire”) Fire Protection and Resource Assessment Program (“FRAP”) Moderate, High and Very High Fire Hazard Severity Zones. SMUD’s exposure to liability for damages related to its UARP facilities, which are located within high fire threat areas in El Dorado County, is reduced due to risk mitigation measures adopted by SMUD and the low number of inhabitants and structures near the UARP facilities (See “Wildfire Mitigation” below).

SMUD continues to take responsible action to minimize its exposure to liability from wildfires; however, under current State law, utilities can be held liable for damages caused by wildfires sparked by their equipment or other facilities regardless of whether the utility was negligent or otherwise at fault. PG&E and other major IOUs in the State have experienced credit rating downgrades as a result of potential wildfire liability exposure, which may have implications for the electric market generally. At this time the full extent of SMUD’s potential exposure to wildfire risk is unknown.

Distribution (SMUD Service Territory). State law requires Cal Fire to classify areas in the State based on the severity of the fire hazard that is expected to prevail there. These areas or “Fire Hazard Severity Zones” are based on factors such as fuel (material that can burn), slope and the expected chance of burning. There are three Fire Hazard Severity Zones (Moderate, High and Very High) based on increasing fire hazard. Portions of SMUD’s service territory are located within these Fire Hazard Severity Zones. SMUD has assessed its service territory based on Cal Fire’s FRAP map, adopted in 2007; the following table illustrates SMUD’s assessment of the approximate extent of its service territory and retail customer base located within the three Fire Hazard Severity Zones as of March 2019.

Fire Hazard Severity Zone	Moderate	High	Very High
Acres of SMUD Service Area	231,816	2,337	1,061
% of Total SMUD Service Area	40.6%	0.4%	0.2%
Number of Retail Customers	53,621	4,285	148
% of Total Retail Customers	7.7%	0.6%	0.0%

Transmission (Outside of SMUD Service Territory). In 2018, the CPUC approved a new statewide fire map that identifies areas of elevated and extreme wildfire risk from utility-associated assets located throughout the State. SMUD directly participated in the development of the CPUC’s statewide fire map. In connection with the development of the CPUC’s statewide fire map, a peer review and a team of independent nationwide experts led by Cal Fire affirmed that SMUD’s electric service area is properly located outside of these elevated (“Tier 2”) and extreme (“Tier 3”) high fire threat areas; however, SMUD’s UARP facilities are located within both Tier 2 and Tier 3 areas. According to the CPUC, Tier 2 fire-threat areas are areas where there is an elevated wildfire risk from utility assets and Tier 3 fire-threat areas are areas where there is an extreme risk from utility assets. As of June 8, 2021, approximately 37 right-of-way miles of SMUD’s transmission lines are in Tier 2 fire-threat areas and approximately 19 right-of-way miles of SMUD’s transmission lines are in Tier 3 fire-threat areas. SMUD is also a member of TANC. As of July 2022, approximately 116.3 right-of-way miles of TANC’s transmission lines are in Tier 2 fire-threat areas and approximately 4.5 right-of-way miles of TANC’s transmission lines are in Tier 3 fire-threat areas. In accordance with its FERC license, SMUD adheres to a FERC-approved Fire Prevention and Response Plan for its UARP facilities. On May 17, 2018, in accordance with State law, SMUD’s Board of Directors determined that the UARP area may have a “significant risk of catastrophic wildfire” resulting from overhead electric facilities and that SMUD’s FERC-approved UARP Fire Prevention and Response Plan meets requirements for presenting wildfire mitigation measures to the Board for its approval.

Wildfire Mitigation. In response to potential wildfire risk, SMUD has implemented and is continuing to implement a series of measures intended to prevent wildfires from occurring, minimize the spread of any fire that does occur and improve the resiliency of its system. These measures include an increase in the degree of sophistication of fuel reduction inside and adjacent to rights-of-ways; installation of Cal Fire-approved exempt material to reduce the risk of sparking; enhanced inspection and maintenance programs; increased use of ignition-resistant construction, including covered conductors and undergrounding of conductors; increased monitoring of and identified responses to fire conditions, including operational procedures for the de-energization of lines during high fire conditions; and elimination of automatic reclosers on SMUD’s transmission lines and on SMUD’s distribution lines in certain areas during fire season.

SMUD’s proactive approach to vegetation management has been expanded to include the use of advanced technologies such as Light Detection and Ranging (“LiDAR”), ortho and oblique imagery that is used to pinpoint tree health and/or condition that may not yet be visible to the naked eye. In addition, SMUD has installed additional weather stations in transmission corridors and substations for increased situational awareness and has continued coordination and collaboration with local agencies and first responders as well as vulnerable populations.

State legislation enacted in 2018 and 2019 (SB 901 and AB 1054, respectively) requires publicly owned utilities (“POUs”) to prepare and present Wildfire Mitigation Plans to their governing boards by January 1, 2020, and annually thereafter. SB 901 requires POUs, including SMUD, before January 1, 2020, and annually thereafter, to prepare a wildfire mitigation plan and present it in a public meeting to their governing board. SB 901 requires POU’s to accept comments on the wildfire mitigation plan from the public, other local and State agencies, and interested parties, and to verify that the plan complies with all applicable rules, regulations, and standards, as appropriate. The bill requires a qualified independent evaluator to review and assess the comprehensiveness of its wildfire mitigation plan and present its report to the board in a public meeting. AB 1054 created a new Wildfire Safety Division within the CPUC to prioritize wildfire safety throughout the State, and established an appointed Wildfire Safety Advisory Board (“WSAB”) to advise and make recommendations relating to wildfire safety to this new Division. For POUs, the bill requires submittal of annual wildfire mitigation plans to the WSAB for review and advisory opinions relating to the content and sufficiency of the plans.

SMUD assembled an enterprise-wide team of subject-matter experts to prepare its plan in compliance with this legislation. SMUD's initial Wildfire Mitigation Plan ("WMP") was adopted by the Board in the fourth quarter of 2019, after circulation for public comment and review of the comprehensiveness of the plan by a qualified independent evaluator. The WMP and evaluator's report were submitted to the WSAB in 2020.

SMUD reviews its WMP each year, presenting the updated plan to the Board for adoption at duly noticed public meetings. The updated plans and evaluator reports are submitted to the WSAB for advisory opinion and recommendations. SMUD responds to the WSAB's comments regarding SMUD's WMP as part of its WMP process. SMUD will continue to annually review and update its WMP, conducting a comprehensive review at least every third year.

SMUD recently completed a comprehensive review and update of its WMP after soliciting public input and independent evaluation. The 2023-2025 WMP was adopted by the Board on June 15, 2023, and duly submitted to the WSAB.

Wildfire Insurance. Wildfires both in California and nationally have not only increased potential liability for utilities, but have also adversely impacted the insurance markets, leading to higher costs for coverage; coverages becoming prohibitively expensive; limited or restricted coverage to certain types of risks; or coverage at insufficient levels. SMUD most recently renewed its general and wildfire liability insurance coverage on June 15, 2023, increasing the coverage limit by \$25 million to \$275 million. SMUD increased the commercially insured portion of its wildfire coverage program from \$176 million to \$212.5 million and maintained the self-insured layers and quota share portions of the coverage at \$62.5 million.

In addition, it is expected that SMUD will have a portion of the \$500 million aggregate principal amount of its commercial paper and line of credit program to provide operational flexibility in the event of the occurrence of a wildfire or other operational event. However, SMUD has not covenanted to maintain the availability of the commercial paper program and line of credit program for these purposes and no assurances can be given that the commercial paper and line of credit program will be available at the time of, or during, such an event.

August 2020 Heat Wave

The State experienced a period of prolonged above average temperatures from August 14, 2020 through August 18, 2020. The CAISO was forced to institute rotating electricity outages in the State during this extreme heat wave. SMUD, as a member of BANC, and being outside of the CAISO did not have to implement any planned power disruptions. Additionally, SMUD was able to support the CAISO during some hours of the heat wave with both requested emergency assistance and wholesale market sales. SMUD's peak demand between August 14, 2020 and August 18, 2020, varied between 2,874 MW and 3,057 MW, well below SMUD's record peak of 3,299 MW.

September 2022 Heat Wave

The State experienced a period of prolonged above average temperatures from September 5, 2022 through September 8, 2022. On September 6, 2022, SMUD experienced its second highest peak demand of 3,263 MW. SMUD did not have to implement any planned power disruptions.

Storm Damage

In January 2023, SMUD experienced a series of winter storms that brought heavy rains and high winds causing damage to SMUD's grid and widespread outages for SMUD's customers. By the time the

storm response was complete, SMUD had experienced the largest mobilization of personnel and restoration crews in its history. SMUD incurred costs related to removing downed trees, restoring power from downed poles and broken lines, replenishing inventory, communicating with and providing assistance to customers, maintaining IT systems, and coordinating with local emergency agencies. SMUD is pursuing claims with Federal and State agencies to attempt to recover certain of SMUD's costs related to the storms. The material financial impacts have been reflected in SMUD's audited financial statements for the years ended December 31, 2023 and December 31, 2022, [which are included in APPENDIX B].

Cosumnes Power Plant Outage

On June 5, 2022, the Cosumnes Power Plant (as defined herein) was shut down due to a ground fault in the Steam Turbine Generator ("STG") stator. The ground fault was caused by delamination of the insulation on one of the through bolts. Damage from the ground fault resulted in a full rewind and restack of the stator core, replacement of all stator through bolts, and a full rewind of turbine rotor. The Cosumnes Power Plant repairs were completed in February 2023 and the plant returned to service on March 5, 2023. During the extended outage, SMUD shifted generation to the other local gas-fired plants and the Sutter Energy Center and procured additional energy and resource adequacy capacity. SMUD also requested and received approval from the California Air Quality Board and California Energy Commission to operate one or both of the gas turbines without the STG. During the September 2022 heatwave, both of the gas turbines at the Cosumnes Power Plant were operated without the STG, providing 270 MW at peak.

To mitigate the financial impact of unplanned outages from its thermal assets, SMUD carries commercial property insurance with a business interruption endorsement. At the time of the loss, the coverage provided up to \$30.8 million of business interruption recovery per month at the Cosumnes Power Plant, with a sub-limit of \$310 million over any 18-month period. During the policy period, claims were subject to a \$5 million equipment damage deductible and a 60-day business interruption claims waiting period.

SMUD has settled the equipment damage portion of the loss for \$18.6 million, resulting in a \$13.6 million recovery. The business interruption portion of the claim remains in process, with SMUD receiving a \$50 million advance in December of 2022. As of January 2024, the carriers have confirmed an additional \$51 million in undisputed recovery, which is anticipated to be received in the first quarter of 2024. Thus far, SMUD has recovered \$114.6 million of the loss and will continue to work toward full settlement of the disputed portion of the claim, which is approximately \$68 million.

Impacts from COVID-19 Pandemic

While the impact of the COVID-19 pandemic on SMUD has lessened since the height of the pandemic in 2020, SMUD is still experiencing impacts from the pandemic. However, compared to weather adjusted load levels, SMUD's overall load is near or above pre-pandemic levels.

Part of the governmental response to the economic consequences of the pandemic required utility providers (including SMUD) to provide additional grace periods and flexible payment plans for the payment of utility bills or to refrain from pursuing collection remedies for unpaid bills for a period of time. SMUD also implemented a no-shutoff policy through January 2022 under which SMUD did not disconnect power to a customer for non-payment of their electric bill. Beginning in February 2022, SMUD resumed its normal payment, late fee, and disconnection process and began disconnections of unpaid accounts in late April 2022. As a result, SMUD has experienced an increase in delinquencies for customer electric accounts versus pre-pandemic levels. In December 2021, SMUD received \$41 million from the California Arrearage Payment Program ("CAPP") initial funding, and an additional \$9.9 million in 2022. All funds were applied to delinquent balances. As of December 31, 2023, the total delinquencies for customer electric

accounts were \$38.2 million, after the CAPP credit, which is an increase from the February 2020 balance of total delinquencies for customer electric accounts of \$16.9 million. The financial impacts stemming from delinquent accounts have been accounted for in SMUD's audited financial statements for the preceding years. Any successful recovery of delinquent accounts will contribute to an increase in net income.

SMUD also paused the recertification process for existing customers in SMUD's low-income discount program during the pandemic. The number of customers participating in the low-income assistance program increased by 16,407, or approximately 22% from February 2020 to December 2023. SMUD has resumed the recertification process for existing customers in the low-income discount program in 2023.

While the impacts of the COVID-19 pandemic on SMUD have lessened, if the pandemic and its consequences again become more severe or another similar event occurs, the impacts on SMUD's financial results and operations could be material.

RATES AND CUSTOMER BASE

Rates and Charges

SMUD's Board of Directors has autonomous authority to establish the rates charged for all SMUD services. Unlike IOUs and some other municipal utility systems, retail rate and revenue levels are not subject to review or regulation by any other federal, State or local governmental agencies. Changes to SMUD rates only require formal action by the Board of Directors after two public workshops and a public hearing. SMUD is not required by law to transfer any portion of its collections from customers to any local government. SMUD typically reviews and sets rates on a two-year cycle.

2019 Rate Action.

On June 24, 2019, the Board approved a 3.75% rate increase effective January 1, 2020, a 3.00% rate increase effective October 1, 2020, a 2.50% rate increase effective January 1, 2021, and a 2.00% rate increase effective October 1, 2021, for all customer classes. Additionally, the Board approved a restructuring of the commercial rates, including new time periods and an overall increase in the fixed bill components, such as the System Infrastructure Fixed Charge and demand charges, and a corresponding decrease in energy charges, making the restructuring revenue neutral by rate category. To minimize bill impacts, rate categories will be restructured over an eight-year period.

2021 Rate Action.

On September 16, 2021, the Board approved a 1.5% rate increase effective March 1, 2022 and a 2.0% rate increase effective January 1, 2023 for all customer classes. Additionally, the Board approved the Solar and Storage Rate, the optional residential Peak Pricing Rate, and updates to certain schedules of SMUD's Open Access Transmission Tariff ("OATT"). The Board also approved a new timeline for the commercial rate restructure transition, and all impacted commercial customers were transitioned to the new rates by the end of the first quarter of 2022.

SMUD also implemented a solar interconnection fee based on the size of solar interconnection and supporting programs such as battery incentives, incentives to enroll in SMUD's Peak Pricing Rate, battery incentives for Virtual Power Plants, and a program to bring the benefits of solar to under-resourced multi-family communities. These programs and fees are not subject to Board approval.

2023 Rate Action.

On September 21, 2023, the Board approved a 2.75% rate increase effective January 1, 2024, a 2.75% rate increase effective May 1, 2024, a 2.75% rate increase effective January 1, 2025, and a 2.75% rate increase effective May 1, 2025 for all customer classes. The Board also approved establishing the Energy Assistance Program Rate (“EAPR”) Rate Stabilization Fund, which will provide an additional discount to those low-income customers with the greatest need. The discount will be funded with discretionary, non-retail rate revenue, as to not have an impact on any future required rate changes. There is currently pending litigation concerning the adoption of the 2023 rates. See “LEGAL PROCEEDINGS – Proposition 26 Lawsuit.”

Rate Stabilization Funds

The Rate Stabilization Fund (“RSF”) is maintained by SMUD to reduce the need for future rate increases when costs exceed existing rates. At the direction of the Board, amounts may be either transferred into the RSF (which reduces revenues) or transferred out of the RSF (which increases revenues). The Board authorizes RSF transfers on an event driven basis. The RSF includes funds to hedge variations in the volume of energy received from WAPA hydroelectric generation, variation in AB 32 revenue and variations in Low Carbon Fuel Credit (“LCFS”) revenue. As of December 31, 2023, the balance in the RSF was \$115.8 million, which is approximately 7.2% of annual retail revenue.

Effective July 2008, SMUD implemented the HGA, which is a pass-through rate component to deal with variations in hydroelectric generation from the UARP (see “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Hydroelectric*”). The HGA is designed to increase revenues in dry years when SMUD must buy power to replace hydroelectric generation and return money to the HRSF in wet years when SMUD has more hydroelectric generation than expected. Each year SMUD determines the impact of precipitation variances on projected hydroelectric generation from the UARP. When the precipitation variance results in a deficiency of hydroelectric generation from the UARP, transfers from the HRSF, which was created as a component of the RSF, to SMUD’s available cash, will be made in an amount approximating the cost to SMUD of replacement power (up to 4% of revenues) until the balance in the HRSF is zero. When the precipitation variance results in a projected surplus of hydroelectric generation from the UARP, deposits will be made into the HRSF in an amount approximating the positive impact to SMUD from the surplus hydroelectric generation (up to 4% of revenues) until the balance in the HRSF is equal to 6% of budgeted retail revenue. If the balance in the HRSF is not sufficient to cover transfers that would otherwise be made in the event of a projected deficiency in UARP hydroelectric generation, a 12-month HGA surcharge will automatically be included on customers’ electric bills at a level that generates up to 4% of retail revenue. If the balance in the HRSF is equal to 6% of budgeted retail revenue on any precipitation variance calculation date and the precipitation variance results in a projected UARP hydroelectric generation surplus, the positive impact of the surplus may be used for other purposes at staff’s recommendation, with the approval of the Board, including returned to customers through an electric bill discount up to 4% of retail revenue. SMUD calculates HRSF transfers based on an April-March (water year) precipitation period at Fresh Pond, California. This precipitation station is used to approximate available water supply to SMUD’s UARP hydropower reservoirs. As of January 31, 2024, and based on the current HRSF water year precipitation forecast, SMUD anticipates transferring \$20.8 million out of the HRSF in April 2024.

In September 2023, SMUD added a pass-through rate component to deal with variations in hydroelectric generation from WAPA. Each year SMUD determines the WAPA Energy Delivery Variance (“EDV”) based on forecasted energy delivery minus the actual energy delivery. When the EDV variance is positive, transfers from the WRSF, which was created as a component of the RSF, to SMUD’s available cash, will be made in an amount approximating the cost to SMUD of replacement power (up to 2% of

revenues) until the balance in the WRSF is zero. If the balance in the WRSF is not sufficient to cover transfers that would otherwise be made in the event of a projected deficiency in WAPA hydroelectric generation, a 12-month HGA surcharge will automatically be included on customers' electric bills at a level that generates up to 2% of retail revenue. When the EDV variance is negative, deposits will be made into the WRSF in an amount approximating the positive impact to SMUD from the surplus hydroelectric generation (up to 2% of revenues) until the balance in the WRSF reaches a maximum of 4% of budgeted retail revenue. Any deposit amount that exceeds the WRSF maximum of 4% of budgeted retail revenue, may be used for other purposes with the approval of the Board, including returned to customers through an electric bill discount up to 2% of retail revenue. SMUD calculates WRSF transfers based on a forecasted delivery as provided by WAPA. As of January 31, 2024, and based on the current WRSF water year precipitation forecast, SMUD anticipates transferring \$5.7 million into the WRSF in April 2024.

As of December 31, 2023, the balance in the RSF, not including the HRSF, was \$115.8 million, which is approximately 7.2% of annual retail revenue. SMUD transferred approximately \$65.4 million into the HRSF from SMUD's available cash in April 2023 due to above average precipitation, which increased the balance in the HRSF from \$31 million to approximately \$96.4 million. Although the HRSF and the subaccount of the RSF that hedge variations in the volume of energy received from non-SMUD hydroelectric generation currently have positive balances, below average precipitation could deplete the HRSF and RSF balances to zero.

Low Income Discount

As of December 2023, approximately 91,407 customers received the low-income discount offered by SMUD, which represents approximately 16% of all residential customers. As a result of the COVID-19 pandemic, SMUD suspended recertification during the pandemic. In 2023 SMUD restarted the customer recertification. In 2023, the total discount was approximately \$32.7 million. As a result of the effects of the COVID-19 pandemic and related economic downturn, SMUD experienced an increase in low-income discount applicants. See "FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic."

While the low-income discount has provided substantial benefits to low-income customer bills for years, multiple economic variables, such as inflation and rate increases, have had disproportionately negative impacts on low-income customers, particularly those in the 0-50% Federal Poverty Level ("FPL"). In 2023, SMUD established an EAPR Rate Stabilization Fund ("ERSF") to provide an additional discount to the electricity usage charge up to an established maximum discount ("ERSF Additional Discount") for customers in the 0-50% FPL. The ERSF is funded by discretionary non-retail rate revenue, reviewed on an annual basis, and the specific monthly ERSF Additional Discount is set before the year the value is in effect. SMUD expanded its programs and services starting in 2016 to help customers with energy assistance, home improvement packages and education. SMUD is creating tailored solutions to best meet the needs of low-income customers. These solutions include free solar panels and inspecting homes to identify energy saving and fuel switching opportunities. As of December 2023, SMUD has performed 30,000 energy retrofits and, in partnership with Grid Alternatives (a non-profit organization that focuses on implementing solar power and energy efficiency for low-income families), 230 customers have benefited from free solar installations. Forty-eight additional homes received solar and energy efficiency through a partnership with Habitat for Humanity of Greater Sacramento. As part of SMUD's Zero Carbon Plan and the focus on building electrification, SMUD has also been ramping up electrification investments for low-income customers. Since 2019, SMUD has assisted more than 2,600 households with electrification upgrades. Additionally, SMUD has installed nearly 450 electric vehicle chargers and more than 400 electric vehicle circuits in low-income households or areas that serve low-income customers.

Rate Comparisons

SMUD’s rates remain significantly below those of PG&E and other large utilities throughout the State. The following table sets forth the average charges per kWh by customer class for both SMUD and PG&E. PG&E’s rates reflect their recently approved rate increase effective January 1, 2024.

AVERAGE CLASS RATES

	SMUD Rates (cents/kWh)⁽¹⁾	PG&E Rates (cents/kWh)⁽²⁾	Percent SMUD is Below PG&E⁽³⁾
Residential – Standard	18.98¢	44.67¢	57.5%
Residential – Low Income	13.28¢	28.31¢	53.1%
All Residential	18.00¢	37.78¢	52.4%
Small Commercial (Less than 20 kW)	18.33¢	44.17¢	58.5%
Small Commercial (21 to 299 kW)	16.98¢	43.80¢	61.2%
Medium Commercial (300 to 499 kW)	15.94¢	39.95¢	60.1%
Medium Commercial (500 to 999 kW)	14.93¢	34.52¢	56.7%
Large Commercial (Greater than 1,000 kW)	13.30¢	25.06¢	46.9%
Lighting – Traffic Signals	14.45¢	43.60¢	66.9%
Lighting – Street Lighting	15.73¢	56.32¢	72.1%
Agriculture	15.91¢	39.50¢	59.7%
System Average	16.70¢	36.57¢	54.3%

⁽¹⁾ Projected 2024 average prices for SMUD with rates effective January 1, 2024 and May 1, 2024.

⁽²⁾ PG&E average prices in 2024 reflect rates effective January 1, 2024, per Advice Letter 7116-E dated December 29, 2023.

⁽³⁾ The rates in the Average Class Rates table are calculated by dividing the total revenue of each class by the total usage of that class in kWh. The actual savings per customer will vary based on their electricity consumption.

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The following table shows a comparison of SMUD’s charges for the average residential usage of 750 kWh per month (based on an average of summer and non-summer months) and charges of seven similar neighboring or largest utilities in the State.

STATEWIDE COMPARISON–RESIDENTIAL SERVICE

	Monthly Billing Charge 750 kWh⁽¹⁾⁽²⁾	Percent SMUD is (Below)/Above Utility
Sacramento Municipal Utility District	\$134.88	
Pacific Gas & Electric Company	\$345.42	(61.0%)
Roseville Electric Utility	\$122.20	10.4%
Turlock Irrigation District	\$123.67	9.1%
Modesto Irrigation District	\$162.66	(17.1%)
Los Angeles Dept. of Water & Power	\$185.52	(27.3%)
Southern California Edison Company	\$269.57	(50.0%)
San Diego Gas and Electric Company	\$294.74	(54.2%)

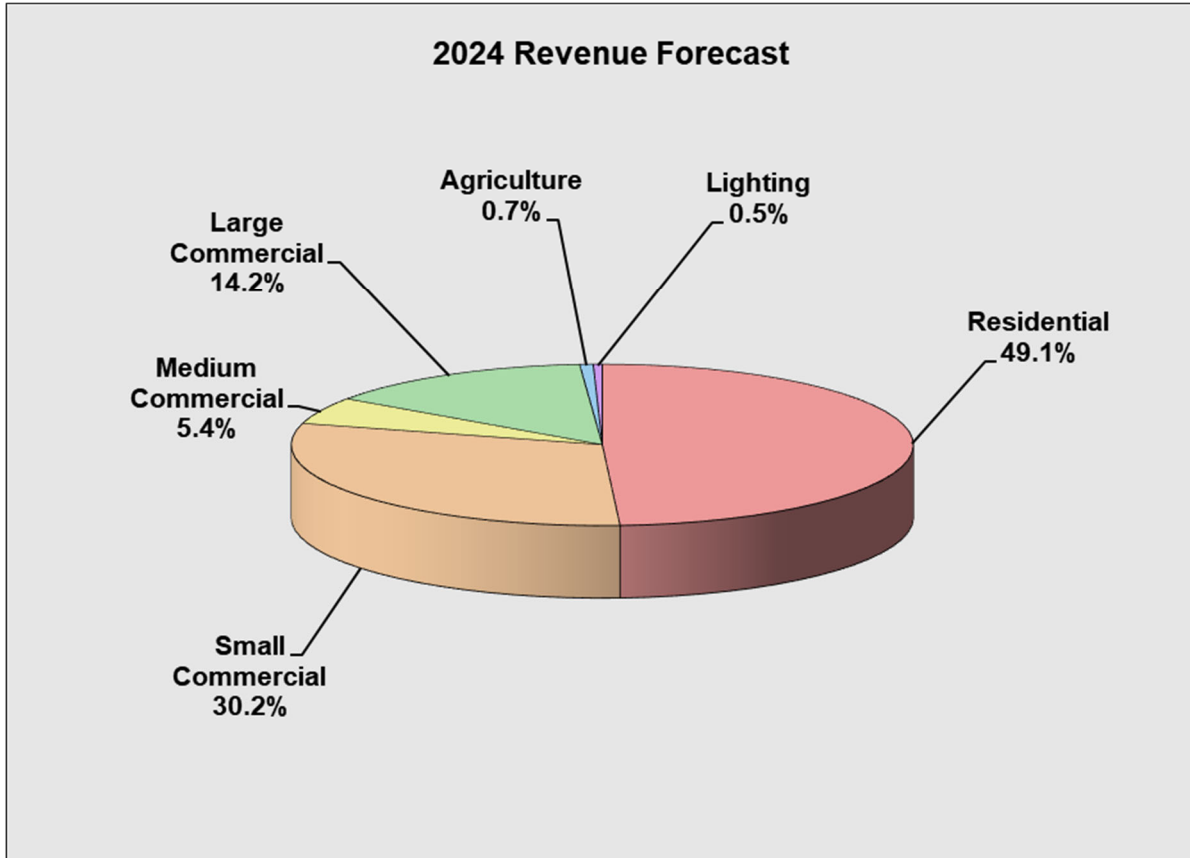
⁽¹⁾ Per individual utility’s published schedules as of January 1, 2024.

⁽²⁾ Average usage of theoretical customer using 750kWh per month.

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Allocation of Revenue by Customer Class

The following chart sets forth the forecast percentage of SMUD revenues from billed sales associated with each customer class.



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Customer Base; Largest Customers

A stabilizing influence on SMUD's revenues is that a substantial proportion is derived from residential customers (49.2% in 2023). Historically, revenue from commercial and industrial consumption has been more sensitive to economic fluctuation. Furthermore, SMUD has no dominant customers that account for a significant percentage of annual revenues. In 2023, no single customer contributed more than 3% of revenues. The top ten customers generated approximately 9% of revenues and the top 30 generated approximately 15% of revenues. The following table presents information on SMUD's top ten customers as of December 31, 2023.

SMUD'S LARGEST CUSTOMERS (As of December 31, 2023)

Customer Type	Annual Revenue (\$ millions)	% of Total Revenue
Government	33.67	2.10%
Government	32.04	2.00%
Government	15.28	0.95%
Technology	13.07	0.82%
Technology	11.05	0.69%
Communications	9.68	0.60%
Industrial Gases	9.28	0.58%
Government	8.27	0.52%
Retail	7.56	0.47%
Communications	7.32	0.46%
Top 10 Total	147.22	9.19%

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POWER SUPPLY AND TRANSMISSION

Power Supply Resources

The following table sets forth information concerning SMUD’s power supply resources as of December 31, 2023. Capacity availability reflects expected capacities at SMUD’s load center, as well as entitlement, firm allocations and contract amounts in the month of July, which is generally SMUD’s peak month.

**POWER SUPPLY RESOURCES
(As of December 31, 2023)**

Source:	Capacity Available (MW)⁽¹⁾
Generating Facilities:	
Upper American River Project – Hydroelectric.....	701
Solano Wind Project – Wind ⁽²⁾	70
Hedge Battery ⁽²⁾	4
Sub-total:	775
Local Gas-Fired Plants:	
Cosumnes Power Plant.....	576
Carson Project.....	103
Procter & Gamble Project.....	166
McClellan.....	72
Campbell Soup Project.....	170
Sub-total:	1,087
Purchased Power:	
Western Area Power Administration (WAPA) ⁽³⁾ ⁽⁴⁾	395
Grady – Wind ⁽²⁾	25
Avangrid (Iberdrola) (PPM) – Wind ⁽²⁾	21
Feed-in-Tariff Photovoltaic – Solar ⁽²⁾	37
Rancho Seco Solar ⁽²⁾	69
NTUA Navajo Drew Solar ⁽²⁾	50
Great Valley – Solar ⁽²⁾	35
Wildflower Solar ⁽²⁾	4
Calpine Geysers – Geothermal.....	100
CalEnergy – Geothermal.....	26
Patua (Gradient/Vulcan) – Geothermal.....	12
Other Long-Term Contracts.....	17
ELCC Portfolio Adjustment ⁽²⁾	120
Sutter Calpine Thermal.....	258
Firm Contract Reserves ⁽⁴⁾	20
Committed Short-Term Purchases ⁽⁵⁾	375
Uncommitted Short-Term Purchases.....	29
Sub-total:	1,590
Total	3,452

(1) Available capacity is the net capacity available to serve SMUD’s system peak load during the month of July.
(2) Capacity values for wind, solar, and storage projects shown are based on resource effective load carrying capability (“ELCC”) modeling.
(3) Total includes SMUD’s Base Resource share and WAPA Customer allocations.
(4) Assumes firm reserves of 5% are included.
(5) Committed Short-Term Purchases are primarily purchased on a year-ahead to season-ahead basis from various sources.

Note: Totals may not add due to rounding.

Power Generation Facilities

Hydroelectric. The UARP consists of three relatively large storage reservoirs (Union Valley, Loon Lake and Ice House) with an aggregate water storage capacity of approximately 400,000 acre-feet and eight small reservoirs. Project facilities also include eight tunnels with a combined length of over 26 miles and eight powerhouses containing 11 turbines. In addition to providing clean hydroelectric power and operating flexibility for SMUD, the UARP area provides habitat for fish and wildlife and a variety of recreational opportunities, including camping, fishing, boating, hiking, horseback riding, mountain biking and cross-country skiing.

The combined capacity of the UARP is approximately 685 MW at SMUD's load center in Sacramento. Under current licensing and mean water conditions, these facilities are expected to generate approximately 1,600 GWh of electric energy annually, which represents approximately 15% of SMUD's current average annual retail energy requirements. In 1957, the Federal Power Commission (predecessor agency to FERC) issued a license to SMUD for the UARP. This 50-year license was subsequently amended to add and upgrade facilities and now includes all segments of SMUD's hydroelectric facilities located on the South Fork of the American River and its tributaries upstream from the Chili Bar Project (described below). On July 23, 2014, FERC issued to SMUD a new 50-year license for the UARP.

On November 9, 2016 FERC issued an Order authorizing SMUD to construct the South Fork Powerhouse downstream of the UARP's Slab Creek Dam. Construction was substantially completed in the fall of 2020, and the new powerhouse was placed into operation on October 25, 2022, adding 1.8 MW of generation to the UARP's overall capacity.

On June 16, 2021, pursuant to Board authorization, SMUD acquired the Chili Bar Hydroelectric Project which consists of a 7 MW powerhouse, reservoir, dam and spillway, north of Placerville on the South Fork of the American River for approximately \$10.4 million (the "Chili Bar Project"). The Chili Bar Project is immediately downstream from the UARP and operates as the regulating reservoir for the UARP's largest powerhouse. Owning the UARP and the Chili Bar Project enables SMUD to operate the two projects with a holistic approach to license compliance and generation efficiency.

Solano 2 Wind Project. SMUD owns and operates an 87 MW wind project, located in Solano County, known as Solano 2. Solano 2 consist of 29 wind turbine generators ("WTGs") rated at 3 MW each. Energy from the project is collected at 21 kV and transmitted over a dedicated 3-mile overhead system to the SMUD-owned Russell substation. At the Russell facility, the energy is transformed to 230 kV and interconnected to PG&E's Birds Landing Switching Station. Energy deliveries are scheduled through the CAISO.

Solano 3 Project. In 2011 and 2012, SMUD constructed a 128 MW wind project adjacent to Solano Phase 2, known as Solano 3. The Solano 3 project consists of 31 WTGs rated at 1.8 MW and 24 WTGs rated at 3.0 MW. The project interconnects through a 34.5 kV underground collection system to the Russell substation. Like the Solano Phase 2 project, this energy is transformed to 230 kV and delivered through the CAISO.

Solano 4 Project. SMUD has developed the Solano 4 Wind Project on land with a wind easement owned by SMUD near the Solano 3 project, known as the Collinsville and Roberts properties, to install 10 WTGs rated at 4.5 MW, and to remove the Solano 1 turbines and replace them with 9 WTGs rated at 4.5 MW. SMUD has met all of the CAISO requirements and has an executed a Large Generator Interconnection Agreement ("LGIA") as of June 2021 that will allow for 90.8 MW of capacity at the point of interconnection. In April 2021, SMUD submitted an application for advisory review by the Solano County Airport Land Use Commission (the "Solano ALUC") of the Solano 4 Wind Project's consistency

with the 2015 Travis Air Force Base Land Use Compatibility Plan (the “Travis Plan”). In May 2021, the Solano ALUC purported to resolve that the Solano 4 Wind Project was inconsistent with the Travis Plan. In August 2021, the Board approved the Project Environmental Impact Report, made findings overriding the Solano ALUC’s finding of inconsistency, made findings there was no alternative to the project, and approved the Solano 4 Wind Project. In September 2021, Solano County filed a writ petition challenging SMUD’s approval of the Solano 4 Wind Project based on procedural environmental, zoning and land use grounds. The parties entered into a settlement agreement on December 14, 2022, and the suit was dismissed on January 10, 2023. The settlement agreement allows for the construction of the Solano 4 Wind Project as planned.

In addition, SMUD applied for and obtained extensions of the Federal Aviation Administration Determinations of No Hazard allowing for construction of the turbines. A contract for the construction of the Solano 4 Wind Project was awarded to Vestas Corporation and the Solano 4 Wind Project is currently under construction. The expected operation date for the Solano 4 Wind Project is May 2024. PG&E identified upgrades needed to interconnect the Solano 4 Wind Project that will not be complete before the expected Solano 4 commercial operation date. PG&E has an approved project and expects to complete the needed upgrades by May of 2025. Realization of the full capacity of the Solano 4 Wind Project may be delayed into the second quarter of 2025 due to the timeframe established for the PG&E required transmission upgrades. SMUD has developed a mitigation plan for the limited interconnection capacity for the first year of operation, in coordination with CAISO and PG&E, of using all of the existing SMUD Solano Russell substation interconnection capacity combined for the dispatch of all the Solano Wind Project. SMUD completed a combined LGIA amendment administrative process, which combines all phases of the Solano Wind Project so it may operate as one project. This was fully executed by SMUD, CAISO, and PG&E on February 27, 2023.

As of the end of 2023, all of the turbine site delivery roads and foundations for the Solano 4 Project have been completed, all of the turbine components have been delivered to the Solano 4 Project site and 10 of the Solano 4 Project turbines have been fully erected.

At the completion of the Solano 4 project, SMUD will have an installed wind capacity of 303 MW in connection with the overall Solano Wind Project, leaving 18 MW at the point of interconnection for future development.

Distributed Solar Photovoltaic. SMUD owns and operates approximately 2 MW of solar photovoltaic generating facilities. These facilities include installations at the Hedge Substation property, SMUD Headquarters, the East Campus Operations Center, and other smaller photovoltaic systems throughout the service area on parking lots.

Hedge Battery. SMUD owns and operates a 4 MW, 8 MWh, battery energy storage system located near the Hedge Substation in South Sacramento. The facility reached commercial operation in January 2023.

ESS Flow Battery. SMUD owns and operates a 0.45 MW, 3 MWh, battery energy storage system located near the Hedge Substation in South Sacramento. The facility reached test operation in September 2023, and commercial operation is planned for March 2024.

Local Gas-Fired Plants. SMUD constructed five local natural gas-fired plants in its service area: the Carson Project, the Procter & Gamble Project, the Campbell Soup Project, McClellan and the Cosumnes Power Plant (each defined below). These five plants are referred to collectively as the “Local Gas-Fired Plants.” These plants are a strategic component of SMUD’s resource mix. In addition to providing SMUD a total capacity of approximately 1,139 MW, the Local Gas-Fired Plants provide SMUD with needed

voltage support, operational and load following capability, and the reliability inherent in having power resources located close to loads. With the exception of McClellan, these plants were financed through the issuance of project revenue bonds by separate joint powers authorities (collectively, the “Authorities”). In late 2021, ownership of all of the Local Gas-Fired Plants was transferred to one of the Authorities, SFA. SMUD has entered into long-term agreements with SFA providing for the purchase by SMUD of all of the power from each of the Local Gas-Fired Plants on a take-or-pay basis. This consolidation created operational and administrative efficiencies without changing any of the functionality of the power plants. Although the Local Gas-Fired Plants are owned by SFA, SMUD has exclusive control of their dispatch and manages their operations as part of its overall power supply strategy.

Payments under the power purchase agreements are payable from the revenues of SMUD’s Electric System prior to the payment of the principal of or interest on SMUD’s Senior Bonds and Subordinated Bonds (each as defined under the caption “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS” below), as are other maintenance and operation costs and energy payments. For further discussion of SMUD’s obligations to make these payments to SFA, see “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Joint Powers Authorities.*”

The following is a brief description of the five Local Gas-Fired Plants:

The Cosumnes Power Plant (the “Cosumnes Power Plant”). The Cosumnes Power Plant is a 612 MW natural gas-fired, combined cycle plant located in the southern portion of Sacramento County adjacent to SMUD’s decommissioned Rancho Seco Nuclear Power Plant. Commercial operation of the Cosumnes Power Plant commenced on February 24, 2006. SFA increased the net generating capacity of the facility by 81 MWs via an Advanced Gas Path (“AGP”) upgrade. The additional AGP generation was realized after hardware and software upgrades were completed on both units in March of 2019. The Cosumnes Power Plant is owned by SFA, a joint powers authority formed by SMUD and MID. The existing take-or-pay power purchase agreement between SMUD and SFA expires no earlier than when the related bonds have been paid in full (the outstanding related bonds are scheduled to mature on July 1, 2030). On June 5, 2022, the Cosumnes Power Plant was shut down due to a ground fault in the STG stator. The repair was completed in February 2023 and the plant returned to service on March 5, 2023. See “FACTORS AFFECTING THE REGION – Cosumnes Power Plant Outage”.

The Carson Cogeneration Project (the “Carson Project”). The Carson Project, a 103 MW natural-gas-fired cogeneration project consisting of separate combined cycle and peaking plants, provides steam to the Sacramento Regional County Sanitation District (“SRCSD”) wastewater treatment plant adjacent to the site. The Carson Project was originally owned by the Central Valley Financing Authority (“CVFA”), a joint powers authority formed by SMUD and the SRCSD. Construction of the Carson Project was completed and the plant began commercial operation on October 11, 1995. The CVFA bonds issued to finance the Carson Project were defeased in September 2019. In late 2021, ownership of the Carson Project was transferred to SFA. The take-or-pay power purchase agreement between SMUD and SFA relating to the Carson Project will be in effect until terminated by SMUD.

The Procter & Gamble Cogeneration Project (the “Procter & Gamble Project”). The Procter & Gamble Project, a 182 MW natural gas-fired cogeneration facility, is located in an established industrial area of Sacramento. The initial combined cycle portion of the plant began commercial operation on March 1, 1997. Construction of the peaking plant portion of the Procter & Gamble Project commenced during 2000 and the unit achieved commercial status on April 24, 2001. The Procter & Gamble Project produces steam for use in Procter & Gamble Manufacturing Company’s oleochemical manufacturing processes and electricity for sale to SMUD. The Procter & Gamble Project was originally owned by the Sacramento Cogeneration Authority (“SCA”), a joint powers authority formed by SMUD and SFA, a separate joint powers authority. The SCA bonds issued to finance the Procter & Gamble Project were defeased in

September 2019. In late 2021, ownership of the Procter & Gamble Project was transferred to SFA. The take-or-pay power purchase agreement between SMUD and SFA relating to the Procter & Gamble Project will be in effect until terminated by SMUD.

The Campbell Soup Cogeneration Project (the “Campbell Soup Project”). The Campbell Soup Project, a 170 MW natural gas-fired cogeneration project, was completed and began commercial operations on December 4, 1997. Upgrades were implemented during 2000, which increased the plant’s peaking capacity to 180 MW, well above its net demonstrated capacity of 159.8 MW. The plant is located in south Sacramento adjacent to the Capital Commerce Center (formerly the Campbell Soup Company food processing facility). The Campbell Soup Project was originally owned by the Sacramento Power Authority (“SPA”), a joint powers authority formed by SMUD and SFA. The SPA bonds issued to finance the Campbell Soup Project were redeemed in July 2015. In late 2021, ownership of the Campbell Soup Project was transferred to SFA. The take-or-pay power purchase agreement between SMUD and SFA relating to the Campbell Soup Project (the “Campbell Soup/McClellan PPA”) covers both the Campbell Soup Project and McClellan and will be in effect until terminated by SMUD. In support of the Zero Carbon Plan, SMUD is exploring replacing the Campbell Soup Project in 2026, contingent upon SMUD having sufficient other resources available and grid reliability can be maintained. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – 2030 Zero Carbon Plan.”

The McClellan Gas Turbine (“McClellan”). McClellan is a 72 MW natural gas-fired simple cycle combustion turbine generating plant at McClellan Business Park in Sacramento. This turbine is connected to SMUD’s electric system and is operated to meet SMUD’s peak-load requirements. McClellan is aligned for remote starting and operation with both black start and fast start capabilities. SMUD constructed the McClellan unit in 1986 as a 50 MW emergency power source for the McClellan Air Force Base. In 2001, following the Air Force Base closure, McClellan was upgraded to 72 MW and converted for SMUD’s use. In May 2007, SMUD transferred ownership of McClellan to SPA for more efficient operation. SPA did not issue debt related to McClellan. In late 2021, ownership of McClellan was transferred to SFA. SFA passes all costs of operations and maintenance through to SMUD in accordance with the terms of the Campbell Soup/McClellan PPA. In exchange for paying all costs related to McClellan, SMUD receives all of the power generated thereby on a take-or-pay basis. In support of the Zero Carbon Plan, SMUD is exploring replacing McClellan in 2026, contingent upon SMUD having sufficient other resources available and grid reliability can be maintained. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – 2030 Zero Carbon Plan.”

Fuel Supply

General. SMUD is obligated to arrange for the purchase and delivery of natural gas to the Local Gas-Fired Plants. Management of the natural gas procurement and delivery process is a key focus of SMUD’s reliability and risk policies. Although the natural gas consumption of the power plants for SMUD’s load can vary significantly depending on the season, precipitation, and the market price of power and natural gas, the plants are forecasted to need, on average in 2024, a total of approximately 91,000 Decatherms per day (“Dth/day”) with a daily peak slightly more than 171,000 Dth/day of natural gas. SMUD has implemented a comprehensive strategy to secure a reliable and diversified fuel supply through a variety of agreements for the supply, transportation, and storage of natural gas.

Supply. SMUD hedges a significant portion of its expected gas needs to meet customer power requirements. This includes gas for the Local Gas-Fired Plants and for the Sutter Energy Center. See “Power Purchase Agreements – *Sutter Energy Center*”. This is accomplished through a combination of long-term supply arrangements and an exposure reduction program. The program consists of a primary rolling three-year exposure reduction component, a fuel hedging component on a rolling three-year basis, as well as supplemental fixed calendar year components reaching out up to five calendar years. Long-term

arrangements may consist of a combination of physical commodity supply contracts, financial hedges, or options. Natural gas is purchased from a wide variety of producers and marketers at the northern and southern California borders, and from the San Juan and the Rocky Mountain supply basins. SMUD has a number of both fixed-price supply agreements and financial hedging contracts to fix gas costs ranging from one month to several years in duration. Including fixed price biogas contracts as of February 29, 2024, these contracts are forecasted to have hedged the price exposure on approximately 100%, 82% and 81% of SMUD's anticipated natural gas requirements for 2024, 2025 and 2026, respectively. While the financial effects resulting from the unhedged portions of SMUD's natural gas requirements are difficult to predict, SMUD's financial results could be materially impacted.

SMUD has contracted with NCGA to purchase an approximate average of 8,700 Dth/day over the remaining life of a contract expiring May 31, 2027 (the "NCGA Contract"). Under the NCGA contract, SMUD pays a discounted variable price for the fuel and anticipates periodically fixing the effective price under separate hedging contracts. Until November 1, 2023 the delivery point for the NCGA Contract was the AECO hub in Alberta. Starting November 1, 2023, to increase delivery efficiencies, SMUD has exchanged the gas delivered at the AECO hub under the NCGA Contract with gas delivered at the Malin substation at the California-Oregon border. From there SMUD is using its long-term transport capacity to deliver the fuel to the local area plants.

SMUD has also contracted with NCEA to purchase an approximately 22,000 Dth/day on average, or to be converted to the approximate cash flow value in Megawatt-hours ("MWh") of electricity over the remaining life of a contract expiring on May 31, 2049. The gas will be delivered to the SMUD system via the Malin receipt point on the PG&E backbone system. SMUD is using its long-term transport capacity to deliver the fuel to the local area plants. SMUD will pay a discounted variable price for the fuel and anticipates periodically fixing the effective price under separate hedging contracts. [As described in the forepart of this Official Statement, SMUD expects to amend and restate the contract with NCEA in connection with the issuance of the Bonds (as defined in the forepart of this Official Statement).] [adjust for 2024 Senior Bonds offering documents]

Renewable Natural Gas Supply. As a component of meeting SMUD's RPS goals, SMUD procures renewable natural gas and digester gas as fuels to generate renewable electricity from the Cosumnes Power Plant. Descriptions of the renewable natural gas supply agreements are provided below.

In March 2009, SMUD entered into a 15-year contract (that qualifies as renewable energy) with Shell Energy North America (US), L.P. ("Shell Energy") to purchase up to 6,000 Dth/day of renewable natural gas produced from a landfill project in Texas. SMUD began taking deliveries of this supply in April 2009. In March 2012, SMUD amended the contract with Shell Energy to increase the maximum volumes to 7,300 Dth/day and extended the term by 10 years to March 31, 2034. Currently, the delivery point is PG&E Topock and SMUD is using its long-term transport capacity to deliver it to the Cosumnes Power Plant. In 2016, SMUD entered into a 3-year contract with Shell Energy to sell back the entire volume of renewable natural gas purchased, less 500 Dth/day, to be sold into the vehicle transportation markets. Upon expiration of the initial 3-year contract for the sale of biogas to Shell Energy, SMUD extended the sell back of the entire volume of biogas twice for an additional three years with Element Markets (now Anew RNG, LLC), starting in 2020 and 2023. While SMUD sells the renewable natural gas, it does not count the renewable natural gas towards its RPS obligations.

SMUD contracted with Heartland Renewable Energy, LLC ("HRE") in December 2009 for a 20-year supply of up to 7,000 Dth/day of renewable natural gas from a digester facility in Colorado. Deliveries began in March of 2014. Currently, the delivery point is Opal, Wyoming and SMUD uses its long-term transport capacity to deliver it to the Cosumnes Power Plant. HRE has not delivered volumes from the project to SMUD since December 2016 due to litigation with Weld County, Colorado regarding odor and

permit issues. EDF Renewables, the majority owner of HRE, notified SMUD in August of 2017 that it is in discussions with a short list of bidders to sell its interests in the facility. In June of 2020, the project was purchased and SMUD's contract was assigned to the new owner, Platte River Biogas, LLC ("PRB"). SMUD and PRB reached a settlement in the third quarter of 2021 that could lead to terminating the contract.

In September 2011, SMUD and CVFA entered into a "Digester Gas Purchase and Sale Agreement" through which the Carson Project cleans nearly all of the digester gas received from Sacramento Regional County Sanitation District ("SRCSD") and sells it to SMUD for delivery to the Cosumnes Power Plant. In return, SMUD pays all of the Carson Project's costs in acquiring, cleaning and making the gas available to SMUD. The Digester Gas Purchase and Sale Agreement expires in September 2025. In late 2021, the Digester Gas Purchase and Sale Agreement, along with the Carson Project was transferred to SFA. The Carson Project is currently receiving, processing and selling up to 1,500 Dth/day with provisions for volume increases over time to 2,500 Dth/day. Digester gas, when designated for use in SMUD's power plants, is counted as renewable generation towards SMUD's RPS obligations.

In December 2011, SMUD entered into a 20-year agreement with EIF KC Landfill Gas LLC ("EIF") to purchase up to 7,050 Dth/day of renewable natural gas produced from multiple landfill projects. SMUD began taking deliveries of this supply in January 2014. Currently the delivery point is Kern River – Opal and SMUD uses its long-term transport capacity to deliver it to the Cosumnes Power Plant. Renewable natural gas, when designated for use in SMUD's power plants, is counted as renewable generation towards SMUD's RPS obligations. In April 2022, SMUD entered into a transaction to sell the renewable natural gas purchased into the vehicle transportation markets. The transaction expires in March 2025. While SMUD sells the renewable natural gas, it does not count the renewable natural gas towards its RPS obligations.

AB 2196 is a law that defines the criteria by which existing and future renewable natural gas contracts will qualify for the State RPS program. The CEC adopted a RPS Eligibility Guidebook on April 30, 2013, which includes detailed rules for implementation of AB 2196. SMUD received an updated certificate of eligibility from the CEC in July 2014 for the Cosumnes Power Plant that included the quantities of renewable natural gas from all four contracts. The CEC adopted a revised RPS Eligibility Guidebook (Ninth Edition) on April 27, 2017. This latest guidebook did not change the RPS eligibility of any of the above SMUD renewable natural gas and digester gas contracts, but did simplify reporting requirements for these contracts.

Gas Transmission

SMUD has satisfied its obligation to deliver natural gas to its power plants by constructing a natural gas pipeline, purchasing an equity interest in two PG&E backbone gas transmission lines, and contracting for capacity on a number of existing interstate natural gas transmission lines.

The Local Pipeline. SMUD constructed and owns a 20-inch, 50-mile natural gas pipeline in the greater Sacramento area (the "Local Pipeline") that transports gas to all of the Local Gas-Fired Plants except McClellan. The Local Pipeline is interconnected with PG&E's major State gas transmission lines 300 and 401. Additionally, it may be interconnected with one or more private gas gathering pipelines located in the area, a gas storage project and/or other FERC approved pipelines that may be built in the local area. In conjunction with the construction of the Cosumnes Power Plant, SMUD extended the Local Pipeline to the plant site. The 26-mile extension was completed in 2004. The extension is 24 inches in diameter and was designed to serve both the Cosumnes Power Plant and an additional second phase, if constructed.

PG&E Backbone Gas Transmission Lines 300 and 401. In 1996, SMUD purchased an equity interest in PG&E's backbone gas transmission lines 300 and 401 (referred to as the PG&E backbone). The total capacity acquired at that time was approximately 85,000 Dth/day and consisted of approximately 43,600 Dth/day of firm gas transport from the California–Oregon border at Malin, Oregon and 44,700 Dth/day from the California–Arizona border at Topock, Arizona, to SMUD's interconnection with the PG&E backbone near Winters, California. SMUD was also entitled to a share of non-firm capacity, which was approximately 4,360 Dth/day; making the total capacity potentially available to SMUD almost 90,000 Dth/day. This purchase made SMUD a co-owner of the PG&E backbone gas transmission lines 300 and 401 and obligated SMUD to pay PG&E to operate the pipelines on its behalf subject to the terms of the purchase agreement and operating protocols. PG&E reduced operating pressures on Line 300 after PG&E suffered a natural gas explosion in San Bruno, CA in September of 2010. Operating pressures and capacity may also fluctuate due to regulatory and other changes. As of December 1, 2021, SMUD holds a total capacity of approximately 87,000 Dth/day, consisting of approximately 47,572 Dth/day of firm gas transport from the California–Oregon border at Malin, and 39,193 Dth/day of firm gas transport from the California–Arizona border at Topock, Arizona, to SMUD's interconnection with the PG&E backbone near Winters, California.

Kern River Gas Transmission Company Long Term Agreement. SMUD has an agreement with Kern River Gas Transmission Company for 20,000 Dth/day of firm capacity through April 30, 2028. This capacity gives SMUD access to the Rocky Mountain supply basin at Opal, Wyoming, and connects to PG&E Line 300 (owned in part by SMUD) at Daggett, California.

SMUD's diversified portfolio of gas transmission arrangements allow for the purchase of gas from a variety of suppliers and locations, and the opportunity to capitalize on regional price differentials where possible. In addition, its ownership interest in the SMUD/PG&E backbone and Local Pipeline enhances the reliability of SMUD's gas supply.

Gas Storage

SMUD also employs gas storage as part of its overall fuel supply strategy. Gas storage is useful in helping to balance gas supply, mitigate market price volatility, and provide a reliable supply to meet peak day delivery requirements.

SMUD has a contract with Lodi Gas Storage, LLC, which began in April 2023 and expires in March 2026, for capacity in the Lodi Gas Storage project located near Acampo in northern California. The contract provides SMUD with capacity levels of 1.0 million Dth of storage inventory, 10,000 Dth/day of injection rights and 20,000 Dth/day of withdrawal capacity.

SMUD also has a second contract with Lodi Gas Storage, LLC, which began in April 2022 and expires in March 2024, for additional capacity in the Lodi Gas Storage project located near Acampo in northern California. The contract provides SMUD with capacity levels of 1.0 million Dth of storage inventory, 10,000 Dth/day of injection rights and 20,000 Dth/day of withdrawal capacity. SMUD does not plan to renew this contract upon expiration.

SMUD has a contract with Wild Goose Storage LLC, that will begin in April 2024 (but which allows for early injection (December 2023 – March 2024)) for capacity in the Wild Goose Storage project located near Gridley in northern California. The contract provides SMUD with capacity levels of 2.0 million Dth of storage inventory, ratcheted (12,500-14,000 Dth/day) volumes of injection rights and ratcheted (10,000 – 24,000 Dth/day) volumes of withdrawal capacity.

Power Purchase Agreements

SMUD has a number of power purchase agreements to help meet its power requirements. Some of these agreements are described below.

Western Area Power Administration. Effective January 1, 2005, SMUD entered into a 20-year contract with WAPA. SMUD has entered into a replacement agreement extending the term by 30 years for the period of January 1, 2025 through December 31, 2054. Power sold under this contract is generated by the Central Valley Project (“CVP”), a series of federal hydroelectric facilities in northern California operated by the United States Bureau of Reclamation. The contract provides WAPA’s CVP Base Resource customers (including SMUD) delivery of a percentage share of project generation in return for reimbursement of an equivalent share of project costs. SMUD’s CVP Base Resource share is roughly 25% of project generation and costs. This is expected to be approximately 318 MW of capacity and 661 GWh of energy in an average water year but will vary depending on precipitation. Energy available under the contract is determined by water releases required for water supply and flood control and is then shaped into higher value periods within other CVP operating constraints. More capacity and energy are typically available in spring and summer months and less in fall and winter.

SMUD also has a contract with WAPA expiring December 31, 2024, by which WAPA delivers an additional 200-300 MW per hour from projects located in the Pacific Northwest based on certain contractual parameters. In 2022, SMUD received 1,913 GWh of energy under this contract. SMUD has entered into a replacement agreement for the period January 1, 2025 through December 31, 2030.

Avangrid (formerly Iberdrola Renewables (“Iberdrola”)). SMUD has a contract with Iberdrola that provides SMUD with bundled renewable energy (energy plus RECs). The contract agreement is for 126 GWh of wind power generated in Solano County, California. The SMUD Board approved an extension of the wind contract through June 30, 2025.

Patua Project LLC. In April 2010, SMUD entered into a power purchase agreement with Patua Project LLC (“Patua”), a subsidiary of Gradient Resources, for the delivery of up to 132 MW (expected to be 120 MW nominal power output) of renewable energy from geothermal generation being developed in north central Nevada, from a Gradient Resources project known as the Patua Project. The Patua Project was to have been developed in three phases. Since 2010, the agreed upon capacity has been reduced several times. In December 2013, Phase 1 of the project, which had been reduced to 30 MW, finally achieved commercial operation. In 2014, the parties concluded negotiations on the fourth amendment to the power purchase agreement with Patua, which reduced the total capacity down to 40 MW, extended the commercial operation date of Phase 2 to January 1, 2016, and allowed Patua to add up to 13 MW of solar photovoltaics to supplement geothermal production. In addition, this amendment shifted responsibility to Patua for a portion of the long-term transmission service agreements that have been underutilized due to the project not meeting its targets. In November 2015, the Patua Project was acquired by TL Power, LLC, a wholly owned subsidiary of Cyrq Energy, Inc. (“Cyrq”). In December 2015, Cyrq terminated Phase 2. Upon termination of Phase 2, the contractual right for Cyrq to add solar photovoltaics to supplement geothermal production was reduced to 10 MW. As a result of poor performance during the first year of operation, SMUD reduced its obligation to take power from 30 MW to 25 MW. Performance continued to lag in 2015 and 2016 and SMUD further reduced its obligation to take power from 25 MW to 19 MW.

Renewable Energy Feed-In Tariff. In September 2009, SMUD’s Board authorized a feed-in tariff program for the purchase of renewable energy from local renewable energy projects connected to SMUD’s distribution system. SMUD’s Board authorized connection of up to 100 MW under the feed-in tariff which included standard payment rates and standard purchase terms for power. The feed-in tariff program became effective on January 1, 2010. Under the feed-in tariff, SMUD has executed 20-year term power purchase

agreements for solar projects totaling 98.5 MW. Construction and start-up were completed on all projects between 2010 and 2012.

CalEnergy LLC. In August 2014, SMUD entered into a 22-year power purchase agreement with CalEnergy LLC for the purchase of 30 MW per year of renewable energy from its Salton Sea geothermal facilities. As of July 1, 2017, SMUD began receiving up to 10 MW from the CalEnergy portfolio, which escalated to the full 30 MWs on May 1, 2020.

Rancho Seco Solar. In October 2015, SMUD entered into a 20-year power purchase agreement with Rancho Seco Solar LLC for the purchase of energy from a 10.88 MW solar PV project sited on SMUD's property at the closed Rancho Seco Nuclear Generating Station. Commercial operation was achieved in August of 2016. Rancho Seco Solar LLC leased the property from SMUD under a land lease agreement. The output of this project directly serves two large commercial customers that executed agreements with SMUD for retail supply of solar power.

In May 2019, SMUD entered into a 30-year power purchase agreement for an additional 160 MW solar PV project with Rancho Seco Solar II, LLC. The project is located on SMUD-owned property at the closed Rancho Seco Nuclear Generating Station, adjacent to the existing 10.88 MW solar PV project. Construction began in 2019, and the project became commercially operable in February 2021.

Grady Wind Energy. In October 2015, SMUD entered into a 25-year power purchase agreement with Grady Wind Energy LLC ("Grady") for the purchase of energy from a 200 MW wind project located in New Mexico (the "Grady Project"). The Grady Project began commercial operations on August 5, 2019. Energy from the Grady Project is delivered to CAISO. SMUD purchases 100% of the Grady Project output which includes energy, renewable energy credits, and capacity attributes.

Great Valley Solar 2, LLC. In January 2017, SMUD entered into a 20-year power purchase agreement with Great Valley Solar 2, LLC for the purchase of energy from a 60 MW solar PV project located in Fresno County, California. The project's commercial operation date was December 28, 2017.

ARP-Loyalton Cogen LLC. On September 14, 2016, Senate Bill 859 ("SB 859") was signed into law. Under SB 859, a POU must procure its proportionate share of 125 MW of renewable energy from biomass plants burning high hazard forest fuels, subject to terms of at least five years. Seven POU's (SMUD, MID, Turlock Irrigation District ("TID"), Anaheim Public Utilities, Imperial Irrigation District, Los Angeles Department of Water & Power and Riverside Public Utilities, collectively described herein as the "ARP-Loyalton POU's") jointly solicited proposals for up to 29 MW of contract capacity for renewable energy to meet the requirements of SB 859. In January 2018, SMUD entered into a five-year power purchase agreement with ARP-Loyalton Cogen LLC to fulfill 18 MW of the required 29 MW with SMUD's share being just over 23 percent (the "ARP-Loyalton PPA"). See "*Roseburg Forest Product Co.*" below for a discussion of the remaining SB 859 capacity. The contract became effective on April 1, 2018. On February 18, 2020, ARP-Loyalton Cogen LLC filed for Chapter 11 bankruptcy and stopped producing and selling energy from the biomass plant. On May 7, 2020, the bankruptcy court approved the sale of the Loyalton facility to Sierra Valley Enterprises, LLC ("SVE"). SVE initially expressed interest in bringing the facility back into service; however, the bankruptcy trustee requested repeated extension of the deadline for SVE to accept or reject the ARP-Loyalton PPA. The latest deadline was April 19, 2023, the date of expiration of the ARP-Loyalton PPA term. As SVE did not resume operations before the end of the ARP-Loyalton PPA term, the ARP-Loyalton POU's have negotiated a settlement agreement with the bankruptcy trustee (the "ARP-Loyalton Settlement Agreement"). The ARP-Loyalton Settlement Agreement, which SMUD executed and is filed with the court, defines funds from the performance security that the ARP-Loyalton POU's will keep to cover legal and administrative fees, along with a contingency amount to cover potential risk of future damages. Since the ARP-Loyalton POU's entered into a five-year agreement to

procure compliant biomass and provided SVE the opportunity to accept the ARP-Loyalton PPA and restart operations, the ARP-Loyalton POUs consider their statutory obligations to have been fulfilled.

Roseburg Forest Products Co. For the remaining SB 859 biomass obligation of 11 MW, SMUD and the other ARP-Loyalton POUs have entered into a five-year power purchase agreement with Roseburg Forest Products Co. SMUD's share of the contract capacity is 2.5795 MW, and the plant began operating under the contract on February 26, 2021.

Sutter Energy Center. SMUD entered into an initial two-year contract (with a third-year exercisable option) with Calpine Energy Services, L.P. ("Calpine") for the ability to schedule up to 258 MW of energy from Sutter Energy Center. The Sutter Energy Center is a natural gas-fired, combined-cycle facility located in Yuba City, California. The initial contract became effective on April 1, 2018. SMUD exercised its option to extend the contract, which expired November 1, 2020. SMUD entered into a new contract with Calpine for the same 258 MW of energy that became effective January 1, 2021, and had an original expiration date of January 1, 2024. In December 2021, SMUD extended this contract through December 31, 2026.

Drew Solar, LLC. In June 2018, SMUD entered into a 30-year power purchase agreement with Drew Solar, LLC for the purchase of energy from a 100 MW solar PV project located in Imperial County, California. The project's scheduled commercial operation date was set to be December 31, 2021. The commercial operation date was delayed due to Force Majeure claims surrounding the COVID pandemic and supply chain constraints caused by changes in Federal regulatory requirements. The project began commercially operating on November 3, 2022.

Wildflower Solar. In October 2018, SMUD entered into a 25-year power purchase agreement with Wildflower Solar I, LLC, for the purchase of energy, capacity, and RECs from a 13 MW solar PV project located in Rio Linda, California. The project began commercially operating on December 18, 2020.

Coyote Creek (Formerly Sacramento Valley Energy Center, LLC.) In August 2021, SMUD entered into a 30-year power purchase agreement with Sacramento Valley Energy Center, LLC for the purchase of energy from a 200 MW solar PV and 100 MW four-hour Battery Energy Storage System ("BESS") capacity project located in Sacramento County, California. The project's commercial operation date was originally expected to be December 31, 2023, but has been delayed to 2026 due to ongoing development and permitting delays.

SloughHouse Solar, LLC. In September 2021, SMUD entered into a 30-year power purchase agreement with SloughHouse Solar, LLC for the purchase of energy from a 50 MW solar PV project located in Sacramento County, California. The project's commercial operation date was originally expected to be December 31, 2023, but the commercial operation date has been delayed to March 31, 2025 due to ongoing development and permitting delays.

Country Acres Solar. In November 2023, SMUD entered into a 30-year power purchase agreement with Country Acres Clean Power LLC for the purchase of energy from a 344 MW solar PV project, with a 20-year term for 172 MW four-hour BESS capacity, located in Placer County, California. The project's commercial operation date is expected to be December 15, 2026.

Geysers Power Company, LLC. In March 2021, SMUD executed a 10-year power purchase agreement with Geysers Power Company, LLC for 100 MW of energy and capacity from the Geysers geothermal energy plant located in Lake and Sonoma Counties, California. SMUD started to receive deliveries on January 1, 2023.

Transmission Service Agreements

TANC California-Oregon Transmission Project. The 340-mile COTP is one part of a three 500-kV line coordinated system known as the California-Oregon Intertie (“COI”). The COTP is allocated one-third of the 4,800 MW capability of the COI system (see related agreements below). TANC is entitled to use 1,390 MW and is obligated to pay approximately 80% of the operating costs of the COTP. SMUD is a member of TANC and a party to Project Agreement No. 3 (“PA3”), under which it is entitled to 378 MW and obligated to pay on an unconditional take-or-pay basis about 27.5% of TANC’s COTP debt service and operations costs, subject to a “step-up” obligation of up to 25% of its entitlement share upon the unremedied default of another TANC member-participant. In 2009, SMUD entered into a long-term layoff agreement with certain members that increased SMUD’s entitlement by 35 MW. In 2014, SMUD entered into another long-term layoff agreement with certain other members that increased SMUD’s COTP entitlements by 128 MW and amended the 2009 layoff agreement that returned 13 MW to a member. In January 2024, SMUD entered into an agreement to extend the 2009 long-term layoff agreement with certain members to January 31, 2034. As of January 31, 2024, SMUD was entitled to approximately 528 MW of TANC’s transfer capability for imports and 405 MW for exports, and is obligated to pay approximately 38.6% of TANC’s COTP debt service and operations costs. SMUD’s payments under this contract, like SMUD’s payments under its other power purchase and transmission service agreements, are treated as “Maintenance and Operation Costs” or “Energy Payments” under the resolutions securing the Senior Bonds and Subordinated Bonds (each as defined under the caption “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS” below). SMUD relies on its COTP rights to purchase power, access contingency reserves through the Western Power Pool, and obtain renewable resources to supplement its own resources to serve its load. TANC maintains its own property/casualty insurance program. TANC’s budget for COTP costs, support services and advocacy expenses is about \$45.4 million for 2023. SMUD’s obligation of the TANC budget is about \$17.4 million for 2023.

TANC Tesla-Midway Transmission Service. TANC has a long-term contract with PG&E to provide TANC with 300 MW of transmission service between PG&E’s Midway Substation and the electric systems of the TANC Members (the “Tesla-Midway Service”). SMUD’s share of the Tesla-Midway Service had been 46 MW. As part of the 2009 long-term layoff agreement, SMUD acquired an additional 2 MW of South-of Tesla Principles (“SOTP”) transmission rights for 15 years starting February, 2009 from another TANC member, bringing SMUD’s share of the Tesla-Midway Service to 48 MW.

Bonneville Power Administration. In 2009, SMUD entered into a transmission service agreement with the Bonneville Power Administration (“BPA”) for 60 MW of firm point-to-point transmission service from BPA’s Hilltop substation in northeastern California to the Malin substation at the California-Oregon border for the purpose of transmitting power under SMUD’s power purchase agreement with Gradient Resources for Phase 1 of the Patua geothermal project over BPA’s 230kV transmission lines. In early 2013, in accordance with BPA’s transmission tariff, the transmission service was split into two 30 MW services and deferred as appropriate to better fit the timing of expected commercial operation of Phase 1 and Phase 2 of the Patua Project. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – Patua Project LLC.” SMUD submitted another request for the 30 MW of transmission procured for Phase 2 of the Patua Project to split the service into a 10 MW and a 20 MW service, with the 10 MW of service deferred and timed with the originally expected commercial operation date of Phase 2 of the Patua Project. With the termination of Phase 2 of the Patua Project and SMUD’s reduced obligation due to the poor performance of Phase 1 of the Patua Project, much of the transmission reserved for it will no longer be needed. BPA does not have a provision in its transmission tariff for early termination of transmission service. However, the power purchase agreement with Patua requires Patua to cover unused transmission that SMUD has procured for the Patua purchases. On January 1, 2020, SMUD’s transmission rights with BPA were reduced to 19 MW. This now aligns with SMUD’s PacifiCorp transmission rights of 19 MW described in the immediately following paragraph.

Pacificorp. In 2009, SMUD entered into a transmission service agreement with PacifiCorp for 60 MW of firm point-to-point transmission service across PacifiCorp’s high voltage step-up transformer at the Malin substation at the California-Oregon border for the purpose of transmitting power under SMUD’s power purchase agreement with Gradient Resources for Phase 1 of the Patua Project. In early 2013, in accordance with PacifiCorp’s transmission tariff, the commencement of the 60 MW of transmission service was deferred to fit the timing of first deliveries expected from the 30 MW of Phase 1 of the Patua Project. In 2013, SMUD terminated the 60 MW of transmission service and requested two new transmission services of 30 MW each, with service start dates timed to better fit with the expected start dates of Phase 1 and Phase 2 of the Patua Project. With the reduction in expected output of the Patua Project, SMUD terminated the second 30 MW transmission agreement, and replaced it with a 10 MW transmission service agreement for Phase 2 of the Patua Project. With the termination of Phase 2 of the Patua Project, SMUD terminated the 10 MW Pacificorp transmission service agreement and as a result of the reduced obligation to take power from the Patua Project, SMUD has reduced its remaining Pacificorp transmission service from 30 MW to 19 MW.

Western Area Power Administration. SMUD does not have a direct interconnection of its power system to the COTP. To receive power deliveries that use its COTP rights, SMUD has a long-term transmission service agreement with WAPA for transmission of 342 MW of power from the COTP line (received at WAPA’s Tracy or Olinda substations) to SMUD’s system. In May of 2011, WAPA completed the Sacramento Voltage Support Transmission Project. Completion of this project has given SMUD an additional 165 MW of transmission service rights on WAPA’s system from the COTP at the Olinda Substation to SMUD’s system at the Elverta Substation.

Projected Resources

The following tables titled “Projected Requirements and Resources to Meet Load Requirements Energy Requirements and Resources” (the “Energy Table”) and “Capacity Requirements and Resources Net Capacity – Megawatts” (the “Capacity Table”) describe SMUD’s contracted commitments and owned resources available to meet its forecasted load requirements through the year 2033. Resources are shown on an annualized basis with market purchases netted against surplus sales to arrive at a single net position for each year. Because SMUD’s available resources do not exactly match its actual load requirements on an hourly basis, there are times during a year when resources available will either exceed or be insufficient to meet SMUD’s needs. Expected actual capacity values are included in the tables. These values may differ from measured net demonstrated capacity values of the Local Area Gas-Fired Plants. The table below also includes the impact energy efficiency has on resource requirements as discussed below under “Demand Side Management Programs.” See “BUSINESS STRATEGY” and “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Local Gas-Fired Plants.*”

Resources listed in both the Energy Table and the Capacity Table are listed as either renewable or non-renewable. Generally, SMUD follows the CEC guidelines for eligibility requirements. Some of SMUD’s renewable resources listed include solar, wind, geothermal, small hydroelectric facilities with a capacity of 30 MW or less, and biomass (representing generation from a fuel comprised of agricultural wastes and residues, landscape and tree trimmings, wood and wood waste).

As in any forecast, assumptions are made. In both the Energy Table and the Capacity Table the WAPA and UARP forecasts assume average water conditions throughout the period. On the capacity table, WAPA and Cosumnes Power Plant renewable capacity is estimated based on the ratio of renewable energy to total WAPA or Cosumnes Power Plant energy. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Hydroelectric.*”

The Uncommitted Purchases (Sales) on the tables represent either anticipated future needs or surpluses. Future needs are met well in advance of delivery. They also include both renewable and non-renewable resources.

The Transmission Losses represent reductions in the amount of energy or capacity from the location it was purchased to the point of entering SMUD's electrical system. This amount reduces the Total Resources available to meet the Total Projected Energy Requirements of the electrical system.

Demand Side Management Programs

SMUD's demand-side management initiatives represent an integral element of its total resource portfolio, and are organized into two major components: energy efficiency and load management programs. Energy efficiency offerings include a wide variety of programs and services to customers to retrofit or upgrade existing equipment and fixtures and to install new energy efficiency measures in existing and new construction facilities. Load management allows SMUD to reduce the load on the electric system by cycling residential air conditioning, and calling upon commercial/industrial customers to curtail energy usage when energy is constrained during the summer or system emergencies. Load management programs are projected to allow SMUD to shed approximately 60 MW of peak load in an emergency on a hot day, representing about 2% of SMUD's maximum system peak demand.

The customer "smart meter" system with 2-way communication capability provides information regarding customer usage patterns, which is expected to help SMUD tailor rate designs that provide customers with both the information and ability to manage their energy usage around high energy cost periods.

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**PROJECTED REQUIREMENTS AND RESOURCES TO MEET
LOAD REQUIREMENTS⁽¹⁾
ENERGY REQUIREMENTS AND RESOURCES (GWh)**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Renewable Resources										
<u>District or Joint Powers Authority Owned:</u>										
UARP - Small Hydro ⁽²⁾	95	92	94	94	94	94	94	94	94	94
Solano Wind	776	898	902	836	837	836	836	836	837	836
Cosumnes-Shell Landfill Gas and Digester Gas ⁽³⁾	61	505	582	692	692	692	692	692	692	692
Total	932	1,495	1,578	1,622	1,623	1,622	1,622	1,622	1,623	1,622
<u>Purchases</u>										
Western (WAPA) – Small Hydro ⁽²⁾	27	15	15	15	15	15	15	15	15	15
Grady – Wind	900	897	897	897	900	897	897	897	900	897
Avangrid (Iberdrola) (PPM) - Wind	73	34	0	0	0	0	0	0	0	0
Patua (Gradient/Vulcan) – Geothermal	113	146	147	147	147	147	147	141	147	147
Geysers – Geothermal	878	876	876	876	878	876	876	876	878	0
Cal Energy – Geothermal	224	223	223	223	224	223	223	223	224	223
Great Valley SolarShares	170	171	169	169	169	169	166	166	167	163
Rancho Seco PV2	332	330	328	327	325	323	322	320	319	317
Rancho Seco PV	22	22	22	22	22	22	22	22	22	22
Feed-in-Tariff Photovoltaic – Solar	209	208	207	206	205	204	203	202	60	0
Navajo Drew (NTUA) Solar	301	298	291	289	288	286	285	284	282	281
Sloughhouse (Kings Country)	0	22	125	124	124	123	122	122	121	121
Wildflower Solar	31	31	33	33	33	33	33	33	33	33
CoyoteCreek (SVEC) Solar	0	0	507	505	502	500	497	495	492	490
Country Acres	0	0	710	706	703	699	696	692	689	689
Other Long-Term Contracts	149	139	29	8	8	6	6	6	6	4
Future Uncommitted Renewables	0	0	0	600	1,989	3,351	4,206	4,537	5,870	5,870
Total	3,430	3,411	4,580	5,147	6,534	7,875	8,717	9,030	10,225	9,271
Non-Renewable										
<u>District or Joint Powers Authority Owned:</u>										
UARP – Large Hydro ⁽²⁾	1,536	1,578	1,610	1,618	1,625	1,635	1,625	1,617	1,626	1,635
Cosumnes Power Plant	4,219	3,756	3,685	2,511	1,792	675	675	530	528	525
Procter & Gamble Project	855	794	235	123	43	2	3	5	4	4
Carson Project	391	450	7	3	0	1	3	4	4	2
Campbell Soup Project	1,018	838	0	0	0	0	0	0	0	0
McClellan	36	0	0	0	0	0	0	0	0	0
Total	8,055	7,415	5,538	4,256	3,460	2,313	2,306	2,157	2,163	2,166
<u>Purchases</u>										
Western (WAPA) – Large Hydro ⁽²⁾	785	485	485	485	485	485	485	485	485	485
Western (WAPA) Customers (Wheeling) ⁽²⁾	46	29	29	29	29	29	29	29	29	29
Calpine Sutter	1,556	1,713	1,585	0	0	0	0	0	0	0
Committed Purchases	444	0	0	0	0	0	0	0	0	0
Total	2,831	2,227	2,099	514	514	514	514	514	514	514
Total Resources	15,247	14,548	13,795	11,538	12,131	12,324	13,159	13,323	14,526	13,573
Uncommitted Purchases / (Sales)	(4,420)	(3,613)	(2,775)	(399)	(780)	(906)	(1,672)	(1,780)	(2,866)	(1,867)
Transmission Losses (COTP/CVP)	(3)	(4)	(48)	(82)	(102)	(129)	(146)	(152)	(179)	(179)
Total Projected Energy Requirements	10,825	10,932	10,973	11,058	11,250	11,289	11,340	11,391	11,481	11,527
Energy Efficiency (EE)	26	50	74	98	122	141	160	180	197	224
Customer PV	67	98	133	164	196	228	259	288	317	344
Expected Electric Vehicle (EV) Charging	(88)	(167)	(265)	(382)	(514)	(661)	(821)	(980)	(1,157)	(1,357)
Electric Building (EB)	(13)	(32)	(54)	(80)	(113)	(156)	(209)	(272)	(343)	(417)
Battery Storage (Utility)	(0)	(1)	(118)	(121)	(142)	(188)	(225)	(232)	(266)	(266)
Battery Storage (BTM)	(0)	(1)	(1)	(2)	(3)	(5)	(6)	(8)	(10)	(11)
Total Gross Energy Requirements before EE, PV and EV Charging	10,816	10,880	10,741	10,734	10,795	10,648	10,498	10,367	10,219	10,044

(1) Totals may not sum due to rounding. Excludes a potential carbon sequestration power purchase agreement that SMUD is considering.

(2) 2024 based on current precipitation levels as of December 31, 2023. All other years assume average precipitation.

(3) Includes a biomethane contract counted as renewable (see “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Renewable Natural Gas Supply*”).

CAPACITY REQUIREMENTS AND RESOURCES⁽¹⁾
NET CAPACITY – MEGAWATTS

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Load:										
Planned Peak	2,981	2,991	2,990	3,017	3,024	3,029	3,032	3,056	3,088	3,104
Transmission Losses	28	28	28	28	28	28	28	28	28	28
Dispatchable Demand Resource	(71)	(71)	(165)	(165)	(183)	(202)	(165)	(165)	(165)	(165)
Adjusted Peak	2,938	2,949	2,853	2,880	2,869	2,855	2,895	2,919	2,951	2,967
Reserve Margin	514	516	499	504	502	500	507	511	516	519
Adjusted Peak with Reserves	3,452	3,465	3,352	3,384	3,371	3,355	3,402	3,430	3,467	3,486
Renewable Resources										
<u>District or Joint Powers Authority Owned:</u>										
UARP – Small Hydro	45	45	45	45	45	45	45	45	45	45
Solano Wind	70	129	128	139	133	134	113	108	115	109
Cosumnes – Shell Landfill Gas and Digester Gas ⁽²⁾	8	68	120	120	120	120	120	120	120	120
Total	123	242	293	304	298	299	278	273	279	273
<u>Purchases</u>										
Western (WAPA) – Small Hydro	11	9	9	9	9	9	9	9	9	9
Grady – Wind	25	20	75	68	58	74	72	72	66	67
Avangrid (Iberdrola) (PPM) - Wind	21	--	--	--	--	--	--	--	--	--
Patua (Gradient/Vulcan) – Geothermal	12	12	12	12	12	12	12	12	12	12
CalEnergy– Geothermal	26	26	26	26	26	26	26	26	26	26
Geysers – Geothermal	100	100	100	100	100	100	100	100	100	100
Great Value Solar Shares	35	33	12	11	13	11	9	6	7	5
Rancho Seco – PV1	2	2	1	1	1	0	0	0	0	0
Rancho Seco – PV2	66	61	22	19	17	14	14	10	10	8
Feed-in-Tariff Photovoltaic - Solar	37	31	10	8	7	6	6	4	4	--
Wildflower Solar	4	4	1	1	1	1	1	1	1	0
Navajo Solar	50	46	16	12	12	9	8	5	6	4
Sloughhouse Solar	--	--	18	15	14	13	13	10	10	8
CoyoteCreek Solar with Storage	--	--	159	149	142	142	132	130	127	122
CountryAcre with Storage	--	--	257	245	236	232	222	220	216	211
Stand-alone Storage	4	5	80	601	601	717	757	844	983	1,088
Future Uncommitted Renewables (Solar, Wind, Other)	--	--	--	51	146	148	184	189	184	193
Future Uncommitted Firm Renewables (Geothermal)	--	--	--	--	150	150	200	200	200	200
Other Long-Term Contracts	17	16	2	2	2	2	2	2	2	1
Total	410	364	797	1,330	1,545	1,655	1,767	1,841	1,960	1,954
Non-Renewable										
<u>District or Joint Powers Authority Owned:</u>										
UARP – Large Hydro	656	656	656	656	656	656	656	656	656	656
Cosumnes Power Plant	568	508	492	492	492	492	492	492	492	492
Carson Project	103	103	103	103	100	100	100	100	100	100
Procter & Gamble Project	166	166	166	166	166	--	--	150	150	150
McClellan	72	72	72	--	--	--	--	--	--	--
Campbell Soup Project	170	170	170	--	--	--	--	--	--	--
Total	1,735	1,675	1,659	1,417	1,414	1,248	1,248	1,398	1,398	1,398
<u>Purchases</u>										
Western (WAPA) – Large Hydro	363	304	304	304	304	304	304	304	304	304
Western (WAPA) Customers (wheeling)	21	18	18	18	18	18	18	18	18	18
Sutter Energy Center	258	258	258	--	--	--	--	--	--	--
Firm Contract Reserves ⁽³⁾	20	17	17	17	17	17	17	17	17	17
Committed Purchases	375	--	--	--	--	--	--	--	--	--
Total	1,037	596	596	338	338	338	338	338	338	338
Total Variable Renewal Diversity Benefit/(Risk)	120	91	178	219	262	318	353	452	481	482
Uncommitted Purchases / (Sales)	34	503	(165)	(478)	(482)	(508)	(577)	(867)	(984)	(960)
Total Resources	3,458	3,470	3,357	3,131	3,376	3,360	3,407	3,435	3,472	3,486

- (1) Based on information available as of December 31, 2023. Totals may not sum due to rounding. Capacity values for wind, solar, storage, and future variable renewable projects shown are based on resource ELCC modeling. Excludes a potential carbon sequestration power purchase agreement that SMUD is considering.
- (2) The Cosumnes Power Plant is a 612 MW plant that includes capacity attributable to a biogas contract counted as renewable (see “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Renewable Natural Gas Supply*”).
- (3) SMUD assumes that for all firm system purchases, the suppliers will be planning 5% reserves.

Balancing Authority Area Agreements

Background. SMUD began operating as an independent control area, later termed a Balancing Authority, on June 18, 2002 within the WECC reliability organization's region. This reduced SMUD's exposure to the costs and reliability risks of the CAISO's markets. SMUD expanded its operational footprint beyond SMUD's service territory to include WAPA's electric system, including the MID, Roseville, and Redding service areas (on January 1, 2005) and the COTP (on December 1, 2005). As described further below, SMUD ceased to be the Balancing Authority on April 30, 2011, as BANC took SMUD's place as the Balancing Authority. SMUD remains the operator of the Balancing Authority through a contract with BANC. SMUD administers the contracts with WAPA and TANC to provide specified Balancing Authority-related and other services, and is compensated by WAPA and TANC. TANC recovers such Balancing Authority services costs as a part of its annual operating budget from the COTP Participants and WAPA recovers its Balancing Authority services costs through its rates for power and transmission service. The agreement with WAPA, among other terms, establishes operating procedures and reserve obligations between the parties and terminates on December 31, 2024. BANC, SMUD and WAPA will develop successor agreements in 2024 to take effect upon expiration of the existing contract. WAPA in turn has agreements with electric systems connected to it to assure that such systems also operate reliably (i.e., MID, Roseville and Redding). As a result of the transition to BANC as the Balancing Authority, SMUD assigned or terminated its interconnection and operations agreements with other interconnecting Balancing Authority areas (i.e., CAISO, BPA and TID). BANC is now the party to these agreements as they primarily address only Balancing Authority matters required for compliance with the reliability standards issued by the North American Electric Reliability Corporation ("NERC"), such as emergency assistance arrangements. See also "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY – Western Energy Imbalance Market."

Reliability Standards. The Energy Policy Act of 2005 gave FERC authority to enforce reliability standards for the bulk electric system. In June 2007, these standards became mandatory for SMUD and BANC.

In 2022, SMUD and BANC underwent a combined NERC/WECC audit to evaluate compliance with applicable reliability standards. These audits occur every three years. At the conclusion of the audit, regulators determined that neither entity had any compliance violations related to the Operations and Planning or Critical Infrastructure Protection Standards. SMUD and BANC will undergo another NERC/WECC audit sometime in 2025.

Balancing Authority of Northern California. SMUD, MID, Redding and Roseville executed a Joint Exercise of Powers Agreement (the "BANC JPA Agreement") creating BANC on May 8, 2009. BANC became operational on May 1, 2011 as a Balancing Authority and replaced SMUD as the entity responsible for Balancing Authority-related reliability standards. Since that time, the Trinity Public Utilities District and the City of Shasta Lake have also become members of BANC. As provided in the BANC member agreement, liability for penalties associated with such Balancing Authority-related reliability standards are shared on a *pro rata* basis among the members of BANC. SMUD is the Balancing Authority operator under contract and performs Balancing Authority operational functions on behalf of BANC, much as it did when it was the Balancing Authority. The BANC JPA Agreement assigns cost responsibility based on member load within the BANC Balancing Authority, with SMUD representing approximately 70% of the total load.

Power Pool and Other Agreements

Western Power Pool Agreement. The Western Power Pool ("WPP") is an agreement among over 30 utilities and public agencies in the western United States to coordinate contingency reserve sharing,

referred to as the WPP Reserve Sharing Program (“RSP”). The RSP permits participants to rely on one another in the event that any participant experiences a generating resource outage. While SMUD became an RSP participant in 2009, participation is limited to Balancing Authorities, which SMUD relinquished to BANC in 2011. Under the RSP, BANC and TID (also a WPP member) share their reserve amounts and when necessary and when sufficient unused COTP rights and capacity are available, may call upon WPP reserves from the RSP member systems in the Pacific Northwest. The WPP RSP permits members to operate more efficiently by reducing the contingency reserves that they would otherwise need to have available if they could not rely on each other.

TANC-SMUD OASIS Administration Agreement. SMUD entered into an agreement with TANC to provide OASIS services (transmission sales and scheduling related services in the BANC BA of TANC members’ COTP rights) on September 29, 2005. SMUD is compensated for performing these services. TANC and SMUD entered into a letter agreement dated October 25, 2010 to clarify each party’s role for regulatory reliability standards compliance responsibilities and take into account SMUD’s increased efforts related to supporting TANC’s compliance requirements. SMUD and TANC entered into an agreement to transition this service to the Western Area Power Administration, effective on May 1, 2023. Going forward SMUD will only have a minor role in receiving payments and distributing revenues to the TANC members.

Other Interconnection Agreements

Background. SMUD’s electric system was originally purchased from PG&E in 1947. SMUD’s service area is mostly surrounded by PG&E’s and WAPA’s service areas. The SMUD and PG&E electric systems are interconnected at SMUD’s Rancho Seco and Lake 230-kV substations. SMUD and WAPA are interconnected at SMUD’s Hurley, Elverta, Natomas and Folsom 230-kV substations.

PG&E Interconnection Agreement. PG&E and SMUD executed a Replacement Interconnection Agreement (“RIA”) which became effective on January 1, 2010. The RIA provides that SMUD and PG&E operate their interconnections reliably, plan their electric systems to meet their load requirements, and avoid or mitigate impacts they cause by certain electric system modifications. The agreement has a termination date of December 31, 2024, subject to FERC approval. SMUD and other northern California utilities have similar interconnection agreements with PG&E, albeit with different expiration dates. PG&E filed a successor interconnection agreement with one of these utilities, TID, on November 1, 2023, to become effective on January 1, 2024. Many interconnection customers, including SMUD, intervened and submitted comments or protests in the FERC docket. FERC accepted the filing and TID and PG&E are now in a settlement process, pending litigation if the parties cannot resolve the disputed items. SMUD anticipates that PG&E will seek to negotiate a successor interconnection agreement with SMUD which will be informed by the TID settlement or litigation process. While some functional mechanisms in the interconnection agreement may change, SMUD expects that its successor interconnection agreement will substantially preserve the balance of burdens and benefits consistent with FERC’s standard of requiring rates and terms of service that are just and reasonable. SMUD expects this process to be completed by the current expiration date of the RIA.

PG&E Generator Interconnection Agreements. SMUD signed a LGIA with CAISO and PG&E for the Solano 3 Wind Project, effective December 16, 2008, with a 50-year term. The Solano 2 Wind Project has interconnection rights granted through a LGIA, also with the CAISO and PG&E. The agreement became effective in January 2010 and has a term of 20 years. On June 3, 2021, SMUD entered into a LGIA with the CAISO and PG&E, for the planned 90.8 MW Solano 4 Wind project with a 10-year term and automatic renewal for successive one-year terms thereafter. On February 27, 2023, SMUD completed a combined LGIA amendment administrative process which combines the Solano 2, 3 & 4 projects into one Solano Wind Project. The original agreement conditions for the individual projects are carried forward with

a new combined project maximum production limit of 320.8 MW at the point of interconnection at the Russell Substation.

Other PG&E generator interconnection agreements include a Small Generator Interconnection Agreement with PG&E for Slab Creek with a 22-year term which became effective on January 14, 2010, and a Small Generator Interconnection Agreement with PG&E for the Chili Bar Project with a 10-year term which became effective on June 2, 2021.

WAPA Interconnection Agreement and other WAPA Agreements. SMUD and WAPA executed an interconnection agreement on May 8, 2008 for a term of 40 years which establishes the terms and conditions under which the SMUD and WAPA transmission systems are interconnected and memorializes related understandings. SMUD is working with WAPA on a reconfiguration at the shared Elverta interconnection to increase reliability and accommodate new generation interconnection in the area. SMUD has other agreements with WAPA including for operation of the Sutter Energy Center generating facility, communication systems terms and fiber optic access, training and for use of WAPA labor and heavy equipment to assist SMUD's maintenance activities on an as-available basis.

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SELECTED OPERATING DATA

Selected operating data of SMUD for the four years ended December 31, 2020 through 2023 are presented in the following table.

SMUD SELECTED OPERATING DATA CUSTOMERS, SALES, SOURCES OF ENERGY AND REVENUES

	Year Ended December 31,			
	2023	2022	2021	2020
Customers at End of Period:				
Residential	588,308	576,471	572,786	568,741
Commercial and industrial	70,147	69,512	69,426	68,628
Other	7,253	7,290	7,345	7,354
Total	665,708	653,273	649,557	644,723
MWh Sales:				
Residential	4,676,766	4,763,277	4,749,079	4,906,566
Commercial and industrial	5,374,936	5,805,052	5,649,474	5,453,120
Other	52,660	53,965	54,473	55,590
Total	10,104,362	10,622,294	10,453,026	10,415,276
Surplus power/out of area sales	4,143,139	2,493,651	2,774,907	2,259,991
Total	14,247,501	13,115,945	13,227,933	12,675,267
Sources of Energy Sold MWh:				
Generated by SMUD	7,270,858	4,368,126	6,776,244	6,414,380
Purchased or exchanged	7,308,120	9,162,576	6,884,003	6,691,279
Total	14,578,978	13,530,702	13,660,247	13,105,659
Less System losses and SMUD usage	331,477	414,757	432,314	430,392
Total	14,247,501	13,115,945	13,227,933	12,675,267
Gross System peak demand (kW) ⁽¹⁾	3,059,000	3,263,000	3,019,000	3,057,000
Average kWh sales per residential customer ⁽²⁾	8,018	8,293	8,316	8,650
Average Revenue per kWh Sold:				
Residential ⁽²⁾ (cents)	16.87	16.73	16.20	15.27
Commercial & industrial ⁽²⁾ (cents)	15.00	13.97	13.95	13.17

⁽¹⁾ Peak system MW values are measured at the four SMUD interconnection points and exclude SMUD's generation losses. Historical values include the impacts of dispatchable, non-dispatchable, and energy efficiency program capacity savings.

⁽²⁾ The average kWh sales per residential customer and the average revenue per kWh sold are calculated based upon billed and unbilled sales.

Source: SMUD

SELECTED FINANCIAL DATA

SMUD Financial Information

The following table presents selected financial data of SMUD. Under generally accepted accounting principles, data with respect to SMUD's component units, such as the Authorities, is included with that of SMUD. The following presents data for SMUD only and not its component units, such as the Authorities. SMUD's audited financial statements for the years ended December 31, 2023 and December 31, 2022 [are included in APPENDIX B attached to this Official Statement]. The following unaudited data for SMUD (excluding its component units) is drawn from SMUD's financial records that have been subjected to the auditing procedures applied in the audits of SMUD's and its component units financial statements for the years ended December 31, 2020 through 2023.

SMUD FINANCIAL DATA⁽¹⁾
(thousands of dollars)

Year Ended December 31,

	2023	2022 (Restated)	2021 (Restated)	2020
Summary of Income				
Operating Revenues ⁽²⁾	\$ 1,918,854	\$ 2,138,655	\$ 1,784,290	\$1,582,979
Operating Expenses	(1,772,503)	(2,102,451)	(1,464,069)	(1,397,845)
Operating Income	146,351	36,204	320,221	185,134
Interest and Other Income	145,035	124,480	108,788	63,014
Interest Expense	(73,275)	(74,702)	(81,692)	(80,699)
Change in Net Position	\$ 218,111	\$ 85,982	\$ 347,317	\$ 167,449
Selected Statement of Net Position Information				
Net Plant in Service	\$ 3,652,422	\$ 3,682,180	\$ 3,502,335	\$3,234,208
Construction Work in Progress	587,722	323,499	365,478	460,155
Electric Utility Plant – Net	<u>\$ 4,240,144</u>	<u>\$ 4,005,679</u>	<u>\$ 3,867,813</u>	<u>\$3,694,363</u>
Unrestricted Cash	\$ 534,157	\$ 591,410	\$ 569,001	\$ 662,155
Rate Stabilization Fund	\$ 212,131	\$ 156,016	\$ 188,992	\$ 168,726
Total Assets	\$ 6,610,818	\$ 6,447,908	\$ 6,096,865	\$5,826,449
Net Position	\$ 2,596,004	\$ 2,377,893	\$ 2,291,910	\$1,944,593
Long-Term Debt ⁽³⁾	\$ 2,305,156	\$ 2,236,824	\$ 2,387,686	\$2,523,921
Debt Service Coverage Ratios				
Parity Debt Service Coverage Ratio...	2.58x	1.86x	2.59x	2.25x
Parity and Subordinate Debt Service Coverage Ratio	2.44x	1.78x	2.47x	2.14x

⁽¹⁾ The financial statements of SMUD comprise financial information of SMUD along with its component units, CVFA, SPA, SCA, SFA, NCGA and NCEA. This table includes only financial information of SMUD excluding its component units. Net operating revenues and expenses and Electric Utility Plant and Capitalization of CVFA, SPA, SCA, SFA, NCGA and NCEA are not included in this table, although amounts paid to or received from the Authorities by SMUD are included.

⁽²⁾ Operating Revenues reflect net transfers to (from) the Rate Stabilization Fund for each full year as follows:
2023 \$56.1 million
2022 (\$33.0) million
2021 \$20.3 million
2020 \$25.1 million

Transfers to the Rate Stabilization Fund reduce operating revenues in the year transferred; transfers from the Rate Stabilization Fund increase operating revenues. Transfers from the HGA balancing account in the Rate Stabilization Fund are automatic based on the amount of precipitation received. See "RATES AND CUSTOMER BASE – Rates and Charges" above.

⁽³⁾ Long-Term Debt includes Long-Term Debt due within one year and unamortized premiums.

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Financial Information of SMUD and the Authorities

The following table presents a summary of selected financial information for SMUD and the Authorities.

SUMMARY OF FINANCIAL INFORMATION OF SMUD AND THE AUTHORITIES FOR THE YEARS ENDED DECEMBER 31, 2023 AND 2022 (RESTATED) (thousands of dollars)

	Year Ended December 31, 2023			Year Ended December 31, 2022 (Restated)		
	SMUD	Authorities	Total ⁽¹⁾	SMUD	Authorities	Total ⁽¹⁾
Summary of Income						
Operating Revenues ⁽²⁾	\$ 1,918,854	\$ 314,464	\$ 1,930,664	\$ 2,138,655	\$ 166,674	\$ 2,147,334
Operating Expenses	(1,772,503)	(278,519)	(1,748,368)	(2,102,451)	(120,798)	(2,065,254)
Operating Income	146,351	35,945	182,296	36,204	45,876	82,080
Interest and Other Income	145,035	17,944	136,217	124,480	1,871	89,820
Interest Expense.....	(73,275)	(25,516)	(98,791)	(74,702)	(26,482)	(101,184)
Change in Net Position.....	\$ 218,111	\$ 28,373	\$ 219,722	\$ 85,982	\$ 21,265	\$ 70,716
Selected Statement of Net Position Information						
Net Plant in Service	\$3,652,422	\$ 288,235	\$3,653,965	\$3,682,180	\$ 285,346	\$3,680,736
Construction Work in Progress.....	587,722	2,937	590,659	323,499	24,259	347,758
Electric Utility Plant – Net	\$4,240,144	\$ 291,172	\$4,244,624	\$4,005,679	\$ 309,605	\$4,028,494
Unrestricted Cash	\$ 534,157	\$ 36,458	\$ 570,615	\$ 591,410	\$ 36,454	\$ 627,864
Rate Stabilization Fund	\$ 212,131	--	\$ 212,131	\$ 156,016	--	\$ 156,016
Total Assets	\$6,610,818	\$1,105,825	\$7,320,723	\$6,447,908	\$1,133,460	\$7,217,304
Net Position.....	\$2,596,004	\$ 273,616	\$2,586,699	\$2,377,897	\$ 271,836	\$2,366,977
Long-Term Debt ⁽³⁾	\$2,305,156	\$ 753,465	\$3,058,621	\$2,236,824	\$ 787,215	\$3,024,039

⁽¹⁾ Financial information for SMUD and the SMUD JPAs (CVFA, SPA, SCA, SFA, NCGA and NCEA) include intercompany balances. The financial information reflects balances after the elimination of intercompany accounts including Authorities distributions to SMUD of \$26.8 million in 2023 and \$36.5 million in 2022.

⁽²⁾ Operating Revenues reflect net transfers to (from) the Rate Stabilization Fund as follows:
2023 \$56.1 million
2022 (\$33.0) million

Transfers to the Rate Stabilization Fund reduce operating revenues in the year transferred; transfers from the Rate Stabilization Fund increase operating revenues. Transfers from the HGA balancing account in the Rate Stabilization Fund are automatic based on the amount of precipitation received. See “RATES AND CUSTOMER BASE – Rates and Charges” above.

⁽³⁾ Long-Term Debt includes Long-Term Debt due within one year and unamortized premiums.

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Management's Discussion of SMUD's Operating Results

Year Ended December 31, 2023. For the year ended December 31, 2023, SMUD reported an increase in net position of \$218.1 million as compared to an increase of \$70.7 million for 2022.

Operating revenues were \$228.5 million lower than 2022. This was primarily due to lower sales of surplus gas (\$118.3 million), transfers to the RSF (\$67.2 million), sales to customers (\$28.3 million), transfers from the RSF (\$21.9 million), and LCFS revenue (\$3.9 million), partially offset by higher sales of surplus power (\$13.6 million), AB 32 revenue (\$3.7 million), customer fees (\$1.1 million), and lower transmission revenue (\$2.3 million).

Operating expenses were \$292.8 million lower than 2022. This was primarily due to lower purchased power expenses (\$175.5 million), production operating expenses (\$146.4 million), depreciation expenses (\$22.7 million), production maintenance expenses (\$12.3 million), transmission and distribution operating expenses (\$7.2 million), partially offset by higher administrative and general expenses (\$33.4 million), transmission and distribution maintenance expenses (\$15.8 million), public good expenses (\$8.8 million), and customer service and information expenses (\$6.6 million).

Non-Operating income increased by \$55.2 million primarily due to fair market value assessment and gain on sale of land (\$33.3 million), higher interest income (\$21.7 million), higher unrealized holding gains (\$11.4 million), higher CCA revenue (\$5.7 million), partially offset by lower investment income (\$39.1 million).

Interest expense decreased \$27.9 million from 2022.

Year Ended December 31, 2022. For the year ended December 31, 2022, SMUD reported an increase in net position of \$70.7 million as compared to an increase of \$347.3 million for 2021.

Operating revenues were \$363.0 million higher than 2021. This was primarily due to higher sales to customers (\$130.7 million), sales of surplus gas (\$96.0 million), sales of surplus power (\$62.2 million), transfers to the RSF (\$28.9 million), transfers from the RSF (\$24.3 million), customer fees (\$9.5 million), AB 32 revenue (\$4.9 million) and LCFS revenue (\$2.2 million), partially offset by lower gain on sale of carbon allowance futures (\$3.7 million).

Operating expenses were \$601.2 million higher than 2021. This was primarily due to higher purchased power expenses (\$263.6 million), amortization of pension and OPEB (\$126.9 million), production operating expenses (\$125.1 million), depreciation expense (\$49.5 million), transmission and distribution maintenance expenses (\$22.1 million), production maintenance expenses (\$18.4 million), transmission and distribution operating expenses (\$8.1 million), public good expenses (\$7.4 million), and customer service and information expenses (\$4.5 million), partially offset by lower administrative and general expenses (\$27.4 million).

Non-Operating income decreased by \$19.0 million primarily due to lower grant revenue (\$39.6 million), unrealized holding losses (\$3.7 million), partially offset by higher investment income (\$19.7 million), closeout of escrow account (\$2.8 million), and loss on asset retirements (\$1.9 million).

Interest expense increased \$19.5 million from 2021.

Regulatory Assets. In accordance with Governmental Accounting Standards Board ("GASB") No. 62, "Regulated Operations," SMUD defers, as regulatory assets, certain types of expenditures. These assets are amortized and collected through future rates.

As of December 31, 2023, SMUD had a total of \$916.1 million recorded for regulatory assets. Regulatory assets associated with costs related to implementation of GASB No. 68 which requires SMUD to record a net pension liability was \$323.5 million and deferred outflows related to GASB No. 68 was \$174.6 million at December 31, 2023. Regulatory assets associated with costs related to implementation of GASB No. 75 which requires SMUD to record a net Other Post Employment Benefit (OPEB) liability was \$268.2 million and deferred outflows related to GASB No. 75 was \$39.6 million at December 31, 2023. Regulatory assets associated with Rancho Seco decommissioning costs totaled \$108.0 million at December 31, 2023. Nuclear fuel storage costs and non-radiological decommissioning costs have been collected in rates since 2009. For a complete description of these regulatory assets, see Note 8 (Regulatory Deferrals) to SMUD's financial statements.

The Board has authorized the deferral of any charges or credits that result from the change in valuation of ineffective hedges that should be reported as Investment Revenue/Expense on the Statements of Revenues, Expenses and changes in net position. The Board's resolution establishes that such charges or credits are not included in rates based on market value changes but are included in rates when the underlying transactions occur. Therefore, under GASB No. 62, "Regulated Operations," any such changes are included in the Statement of Net Position as regulatory assets or liabilities. For a complete description of these derivative financial instruments, see Note 9 (Derivative Financial Instruments) to SMUD's financial statements.

RANCHO SECO DECOMMISSIONING

Overview. The 913 MW Rancho Seco Nuclear Power Plant ("Rancho Seco") began Nuclear Regulatory Commission ("NRC") licensed operations in 1974. In June 1989, the electorate of SMUD voted against allowing SMUD to continue to operate Rancho Seco as a nuclear generating facility, and the plant was shut down. In 1991, SMUD submitted a report (the "Financial Assurance Plan") providing required financial assurance to the NRC that SMUD will have sufficient funds available to pay for the cost of decommissioning. On March 17, 1992, the NRC granted SMUD a change from an operating to a possession-only license for Rancho Seco that relieved SMUD from compliance with a number of NRC regulations applicable to operating nuclear power plants. SMUD also filed a proposed decommissioning plan with the NRC (the "Decommissioning Plan"), which was approved in March 1995.

After the decommissioning efforts began, no suitable disposal option was available to SMUD for the Class B and Class C low level radioactive waste generated during the plant decommissioning. With the used nuclear fuel stored onsite requiring oversight staff, SMUD opted to store the Class B and Class C radioactive waste in an existing interim onsite storage building until a suitable disposal option was available. In November 2007, the possession-only license for Rancho Seco was amended to update the Decommissioning Plan to terminate the possession-only license for the Class B and Class C waste in two phases. Phase I of the decommissioning was completed at the end of 2008. Following verification of the site conditions, SMUD submitted a request to the NRC to reduce the licensed facility from 2,480 acres to the interim onsite storage building and about one acre surrounding it. The request was approved by the NRC in September 2009. Phase II of decommissioning included the approximately two-acre interim storage building containing the Class B and Class C radioactive waste and surrounding area. In September 2013, SMUD entered into a contract with the operator of the low-level radioactive waste disposal facility located in Andrews, Texas. Shipment of the Class B and Class C radioactive waste for disposal was completed in November 2014. SMUD conducted additional clean-up activities and radiological surveys, which were followed by NRC confirmatory surveys. The results of these surveys demonstrated unit dose criteria well below NRC release criteria, and the NRC approved the Phase II area for unrestricted use. On September 21, 2017, SMUD formally requested the termination of the possession-only license. On August

31, 2018, the NRC officially terminated SMUD's possession-only license for the remaining Class B and Class C waste at Rancho Seco.

As part of the Decommissioning Plan, the nuclear fuel and Greater Than Class C ("GTCC") radioactive waste is being stored in a dry storage facility (the Independent Spent Fuel Storage Installation or "ISFSI") constructed by SMUD, adjacent to the former reactor facility. The NRC has separately licensed this facility. The DOE, under the Nuclear Waste Policy Act of 1982, is responsible for permanent disposal of used nuclear fuel and GTCC radioactive waste. SMUD has a contract with the DOE for the removal and disposal of this waste. The DOE was to have a waste repository operating by 1998, but has experienced significant and ongoing delays. The Nuclear Waste Policy Act designates Yucca Mountain in Nevada as the final and exclusive repository for the nation's used nuclear fuel. The DOE discontinued the Yucca Mountain license review activities in 2010, but after a court ordered the NRC to resume its review in 2013, the NRC published its final safety evaluation report in 2015. The final safety report, and the final environmental impact statement, concluded that the proposed repository would be safe and environmentally sound for one million years.

Nevertheless, seeking alternatives to Yucca Mountain, the Blue-Ribbon Commission on America's Nuclear Future delivered its final report in January 2012 with several recommendations. The DOE responded to the recommendations by issuing a report in January 2013 (Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste). Key to both documents is a focus on used fuel from decommissioned sites including Rancho Seco. The DOE report accepts most of the Blue-Ribbon Commission recommendations, and contains timelines for fuel management options which proposed removing the fuel from Rancho Seco as early as 2021. However, any progress on the strategies proposed by the DOE is dependent on legislative action by Congress. With no legislative action taken to date, the 2021 projected date for fuel removal slips year-for-year. Therefore, SMUD cannot determine at this time when the DOE will fulfill its contractual obligations to remove the nuclear fuel and GTCC waste from the Rancho Seco facility. In the meantime, SMUD continues to incur costs of approximately \$6 to \$7 million per year for storage of used nuclear fuel at the ISFSI. SMUD has filed a series of successful lawsuits against the federal government for recovery of past spent fuel costs. SMUD last recovered over \$14 million in 2023. SMUD plans to continue pursuing cost recovery claims to ensure it is reimbursed for all such costs in the future. The ISFSI will be decommissioned, and its license terminated after the fuel and GTCC is removed.

Financial Assurance Plan. In accordance with the Financial Assurance Plan, SMUD established and funded an external decommissioning trust fund currently held by Computershare Corporate Trust (the "Decommissioning Trust Fund"). Pursuant to the Financial Assurance Plan, SMUD made the final deposit into the Decommissioning Trust Fund in 2008. Additional deposits are not expected but will be made if increased cost estimates or reduced fund interest earnings require it. In 2011, the NRC began requiring that SMUD demonstrate financial assurance for decommissioning the ISFSI as well as the former power facility, increasing the overall cost for decommissioning Rancho Seco. The estimated total cost for decommissioning the ISFSI was approximately \$7.1 million on December 31, 2023. The decommissioning cost estimate is required to be updated every three years. As of December 31, 2023, the balance of the Decommissioning Trust Fund was \$9.4 million, excluding unrealized gains and losses. Based on the current decommissioning cost estimate and the value of the fund, SMUD's existing Decommissioning Trust Fund provides sufficient funds to complete decommissioning and terminate the ISFSI license.

In addition to these costs, SMUD also estimates that it would cost approximately \$13.1 million to restore the site to make it available for other SMUD uses with some major structures remaining intact. Site restoration is not a legal requirement. No site restoration is currently underway.

EMPLOYEE RELATIONS

SMUD has approximately 2,334 employees, most of whom are covered by a civil service system. SMUD is a contracting member of the California Public Employees' Retirement System ("PERS"). Approximately 50% of SMUD's work-force is represented as to wages, hours and other terms and conditions of employment, by one of three recognized employee organizations, the International Brotherhood of Electrical Workers ("IBEW") Local 1245, the Organization of SMUD Employees ("OSE"), and the SMUD Public Safety Officers' Association ("PSOA"). The remaining 50% of SMUD's work-force, which includes managers, professional, administrative, supervisory, confidential and security staff, is unrepresented.

SMUD negotiated a four-year Memoranda of Understanding ("MOU") with IBEW and the OSE, effective January 1, 2022, through December 31, 2025. Both contracts contain a no-strike/no-lockout clause effective during the life of the agreements. SMUD has an MOU with PSOA effective through December 31, 2026. SMUD has experienced only one labor interruption, which occurred in January 1980 that lasted four days.

RETIREMENT BENEFITS AND POST-EMPLOYMENT MEDICAL BENEFITS

Pension Plans

SMUD participates in PERS, an agent multiple-employer public employee defined benefit pension plan. PERS provides retirement and disability benefits, annual cost-of-living adjustments, and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. Benefit provisions and all other requirements are established by State statute and SMUD policies. The pension plan provides retirement benefits, survivor benefits, and death and disability benefits based upon employees' years of credited service, age, and final compensation.

As of June 30, 2022, the last actuarial valuation date for SMUD's plan within PERS, the market value of the SMUD plan assets was \$2.32 billion. The plan is 87.8% funded on a market value of assets basis, a decrease of 12.3% compared to the June 30, 2021 funded status based on the market value of assets.

As an employer, SMUD is required to contribute a percentage of payroll each year to PERS to fund SMUD's plan based on actuarial valuations performed by PERS. PERS collects the normal cost based on a percentage of payroll and the unfunded liability portion is based on a dollar amount. SMUD also makes partial contributions required of SMUD employees on their behalf and for their account. At the PERS fiscal year ended June 30, 2023, SMUD's required employer contribution rate for normal cost was 8.9% of payroll and the unfunded liability contribution was \$22.4 million. During 2023, SMUD contributed \$37.4 million to PERS (including SMUD's contributions to cover required employee contributions), and SMUD employees paid \$18.3 million for their share of the PERS contribution.

For the fiscal years ending June 30, 2024 and June 30, 2025, SMUD is required to contribute 9.6% and 9.5% of payroll for normal costs and \$10.7 million for fiscal year ending June 30, 2025 for the unfunded liability contribution. There is no estimated employer contribution to the unfunded liability for fiscal year ending June 30, 2024. Assuming no amendments to the plan and no liability gains or losses (which can have a significant impact), PERS has projected that SMUD will be required to contribute 9.4% of payroll to the plan for normal costs and \$15.7 million for the unfunded liability for the fiscal year ending June 30, 2026, not including SMUD contributions to cover required employee contributions. The amount SMUD is required to contribute to PERS is expected to increase in the future. The actual amount of such increases

will depend on a variety of factors, including but not limited to investment returns, actuarial methods and assumptions, experience and retirement benefit adjustments.

SMUD has the option to prepay an annual lump sum payment to PERS for the unfunded accrued liability portion only (not including SMUD contributions to cover required employee contributions). SMUD made an annual lump sum prepayment of \$19.5 million, and also voluntarily made an additional payment of \$47.3 million, for the unfunded accrued liability for the fiscal year ended June 30, 2023. SMUD was not required to make an annual lump sum prepayment and, to date, has not voluntarily made additional payments for the unfunded accrued liability for the fiscal year ending June 30, 2024.

While SMUD has some ability to adjust the retirement benefits provided to its employees, PERS determines the actuarial methods and assumptions used with respect to assets administered by PERS (including the SMUD plan assets) and makes the investment decisions with respect to such assets. For a description of such actuarial methods and assumptions (including the smoothing conventions used by PERS when setting employer contribution rates) and investments, see the comprehensive annual financial report of PERS (SMUD's plan is part of the Public Employees' Retirement Fund of PERS) available on its website at www.calpers.ca.gov. SMUD cannot guarantee the accuracy of such information and neither the comprehensive annual financial report of PERS nor any other information contained on the PERS website is incorporated by reference in or part of this Official Statement. Actuarial assessments are "forward-looking" information that reflect the judgment of the fiduciaries of the pension plans, and are based upon a variety of assumptions, one or more of which may prove to be inaccurate or be changed in the future. Actuarial assessments will change with the future experience of the pension plans.

GASB issued statement No. 68 "Accounting and Financial Reporting for Pensions – An Amendment of GASB Statement No. 27" ("GASB No. 68"). The primary objective of GASB No. 68 is to improve accounting and financial reporting by state and local governments for pensions. Under GASB No. 68, SMUD is required to report the net pension asset or net pension liability (i.e., the difference between the total pension liability and the pension plan's net position or market value of assets) in its Statement of Net Position. This standard requires shorter amortization periods for recognition of non-investment gains and losses and actuarial assumption changes, as well as for recognition of investment gains and losses. GASB No. 68 separates financial reporting from funding requirements for pension plans. The net pension liability as of December 31, 2023 and December 31, 2022 is \$259.0 million and \$235.5 million, respectively.

SMUD provides its employees with two cash deferred compensation plans: one pursuant to Internal Revenue Code ("IRC") Section 401(k) (the "401(k) Plan") and one pursuant to IRC Section 457 (the "457 Plan" and collectively, the "Plans"). The Plans are contributory plans in which SMUD's employees contribute the funds. Each of SMUD's eligible full-time or permanent part-time employees may participate in either or both Plans, and amounts contributed by employees are vested immediately. Such funds are held by a trustee in trust for the employees upon retirement from SMUD service and, accordingly, are not subject to the general claims of SMUD's creditors. SMUD makes annual contributions to the 401(k) Plan on behalf of certain employees pursuant to a memorandum of understanding with both of its collective bargaining units. SMUD matches non-represented employee contributions to the 401(k) Plan up to a set amount. SMUD also makes limited discretionary contributions to non-represented employees hired after January 1, 2013, which contributions fully vest after five years. Prior to 2022, SMUD did not match employee contributions, nor make contributions on behalf of its employees to the 457 Plan. Beginning in 2022, SMUD makes annual contributions to the 457 Plan on behalf of certain employees and matches employee contributions up to a set amount pursuant to a memorandum of understanding with one of its collective bargaining units. SMUD made contributions to both Plans of \$6.9 million in 2023 and to the 401(k) Plan of \$7.0 million in 2022. Participating employees made contributions into both Plans totaling \$34.3 million in 2023 and \$32.4 million in 2022.

Other Post-Employment Benefits

SMUD provides post-employment healthcare benefits, in accordance with SMUD policy and negotiated agreements with employee representation groups in a single employer defined benefit plan, to all employees who retire from SMUD, and their dependents. SMUD also provides post-employment healthcare benefits to covered employees who are eligible for disability retirement. SMUD contributes the full cost of coverage for retirees hired before January 1, 1991, and a portion of the cost based on credited years of service for retirees hired after January 1, 1991. SMUD also contributes a portion of the costs of coverage for these retirees' dependents. Retirees are required to contribute the portion that is not paid by SMUD. The benefits, benefit levels, retiree contributions and employer contributions are governed by SMUD and can be amended by SMUD through its personnel manual and union contracts.

SMUD's post-employment health care benefits are funded through the PERS California Employers' Retiree Benefit Trust ("CERBT"), an agent multiple-employer plan. The funding of a plan occurs when the following events take place: the employer makes payments of benefits directly to or on behalf of a retiree or beneficiary; the employer makes premium payments to an insurer; or the employer irrevocably transfers assets to a trust or other third party acting in the role of trustee, where the plan assets are dedicated to the sole purpose of the payments of the plan benefits, and creditors of the government do not have access to those assets.

SMUD has elected to contribute the normal costs to the CERBT but annually receive reimbursement for cash benefit payments from the CERBT. In 2024, SMUD's contribution for the normal costs to CERBT is \$10.6 million. In 2023, SMUD made a contribution to the CERBT for normal costs in the amount of \$8.6 million. In 2022, SMUD decided to forgo making a contribution for the normal costs to the CERBT because there was a net OPEB asset at December 31, 2021. SMUD can elect to make additional contributions to the trust. During 2023 and 2022, SMUD made healthcare benefit contributions by paying actual medical costs of \$24.7 million and \$24.5 million, respectively. During 2023 and 2022, SMUD received \$24.4 million and \$23.3 million, respectively, reimbursement for cash benefit payments from the CERBT.

At June 30, 2023 and 2022, SMUD estimated that the actuarially determined accumulated post-employment benefit obligation was approximately \$403.6 and \$381.7 million, respectively. At June 30, 2023 and 2022, the plan was 92.3% and 97.9% funded, respectively.

SMUD's actuary uses PERS economic and other assumptions as the basis for the calculation of the post-employment benefit obligation. The actual accumulated post-employment benefit obligation will vary substantially if such PERS assumptions, such as interest rate and life expectancy, among others, prove to be inaccurate or different than SMUD's actual experience. Although SMUD believes that such assumptions and estimates are reasonable, no assurance can be given that any such assumptions will prove to be accurate, or that SMUD's actual accumulated post-employment benefit obligation will not materially exceed its estimates. Additional information is available in Note 15 (Other Postemployment Benefits) and "Required Supplementary Information" to SMUD's consolidated financial statements.

GASB previously issued SGAS No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other than Pensions". The primary objective of GASB No. 75 is to improve accounting and financial reporting by state and local governments for post-employment benefits other than pensions ("OPEB"). Under GASB No. 75, SMUD is required to report the net OPEB asset or net OPEB liability (i.e., the difference between the total OPEB liability and the OPEB plan's net position or market value of assets) in its Statement of Net Position. This standard requires shorter amortization periods for recognition of non-investment gains and losses and actuarial assumption changes, as well as for recognition of

investment gains and losses. The net OPEB liability as of December 31, 2023 and December 31, 2022 is \$25.3 million and \$6.8 million, respectively.

CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS

Estimated Capital Requirements

SMUD has a projected capital requirement of approximately \$2.8 billion for the period 2024 through 2028 as shown in the table below. Approximately 60% of this requirement is anticipated to be funded with internally generated funds and cash on hand.

Special projects include costs relating to construction of large substations and the construction of Solano Phase 4. The Estimated Capital Requirements table below includes \$51 million for Solano Phase 4. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – Solano 4 Project.”

ESTIMATED CAPITAL REQUIREMENTS (Dollars in Thousands)

	Service Area and Other System Improvements Including Distribution System	Improvements to Existing Generation Plant	General Plant	Special Projects	Total Capital Requirements
2024	\$193,180	\$58,070	\$132,454	\$169,315	\$553,019
2025	250,507	72,551	171,736	82,431	577,225
2026	237,026	108,614	138,112	64,880	548,632
2027	237,026	108,614	138,112	64,880	548,632
2028	237,026	108,614	138,112	64,880	548,632

Outstanding Indebtedness

General. SMUD typically finances its capital requirements through the sale of revenue bonds, the sale of commercial paper, from draws on its Revolving Credit Facility (as defined below) and from internally generated funds. With the enactment of the 2022 Inflation Reduction Act and the 2021 Infrastructure Investment and Jobs Act, SMUD is monitoring and exploring new methods of financing, including those afforded under these two federal laws, that provide not-for-profit public power utilities with direct federal incentive payments.

SMUD’s Electric Revenue Bonds (the “Senior Bonds”) are issued pursuant to Resolution No. 6649 (the “Senior Resolution”) adopted in 1971, as amended and supplemented (the “Senior Resolution”). As of December 31, 2023, SMUD had Senior Bonds in the aggregate principal amount of \$1,783,965,000 outstanding. The Senior Bonds are payable solely from the Net Revenues of SMUD’s Electric System. The Senior Bonds are subordinate in right of payment to the prior payment of “Maintenance and Operation Costs” and “Energy Payments” as defined in the Senior Resolution, including payments by SMUD to TANC under PA3, payments by SMUD under power purchase agreements related to the Authorities and payments by SMUD to NCGA and NCEA under their respective gas supply contracts. [Reference to 2024 Senior Bond plan of finance to come]

SMUD’s Subordinated Electric Revenue Bonds (the “Subordinated Bonds”) are issued pursuant to Resolution No. 85-11-1 of SMUD, adopted on November 7, 1985, as amended and supplemented (the

“Subordinate Resolution”). As of December 31, 2023, SMUD had Subordinated Bonds in the aggregate principal amount of \$332,020,000 outstanding. The Subordinated Bonds are payable solely from the Net Subordinated Revenues of SMUD’s Electric System. The Subordinated Bonds are subordinate in right of payment to the prior payment of principal of and interest on the Senior Bonds.

SMUD issues commercial paper notes (the “Notes”) from time to time. As of March 21, 2024, SMUD’s Notes were outstanding in the aggregate principal amount of \$150,000,000. Currently, Notes in the aggregate principal amount of \$400,000,000 may be outstanding at any one time, but SMUD reserves the right to increase or decrease the aggregate principal amount of the Notes that may be outstanding at any one time in the future. The Notes are secured by letters of credit issued by commercial banks. The Notes (and SMUD’s obligations to repay drawings under the letters of credit) are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Senior Bonds and the Subordinated Bonds. Drawings under the letters of credit, to the extent not repaid immediately from the proceeds of commercial paper or other available SMUD funds, are repayable with interest over a period of five years. The letters of credit currently expire in August of 2025 and March of 2027. [Reference to 2024 Senior Bond plan of finance to come]

SMUD also entered into a revolving credit agreement with a commercial bank and issued its taxable and tax-exempt revolving notes thereunder (collectively, the “Revolving Credit Facility”) in February 2022. As of December 31, 2023, no principal amount was outstanding under the Revolving Credit Facility. Currently, the aggregate principal amount that can be outstanding under the Revolving Credit Facility at any one time is limited to \$100,000,000. However, SMUD reserves the right to increase or decrease the aggregate principal amount that can be outstanding at any one time under the Revolving Credit Facility in the future. SMUD’s payment obligations under the Revolving Credit Facility are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Senior Bonds and the Subordinated Bonds. The current term of the Revolving Credit Facility expires in February 2026.

Joint Powers Authorities. SMUD has entered into long-term take-or-pay power purchase agreements with SFA relating to the Local Gas-Fired Plants. Under such agreements, SMUD has exclusive control of the dispatch of all five of the Local Gas-Fired Plants and takes all of the power produced by the Local Gas-Fired Plants. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – Local Gas-Fired Plants.” The Authorities are each treated as component units of SMUD for accounting purposes. Only SFA has outstanding debt, which relates solely to the Cosumnes Power Plant and is payable solely from capacity payments made by SMUD under the related power purchase agreement. As of December 31, 2023, bonds issued by SFA to finance the Cosumnes Power Plant were outstanding in the aggregate principal amount of \$87,890,000. SMUD’s payments under the power purchase agreements relating to the Local Gas-Fired Plants are payable from revenues of SMUD’s Electric System prior to the payment of principal of and interest on the Senior Bonds and Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and Subordinate Resolution.

SMUD and Sacramento Municipal Utility District Financing Authority formed NCGA as a joint powers authority. NCGA is treated as a component unit of SMUD for accounting purposes. NCGA issued \$757,055,000 in bonds in May 2007 for the purpose of paying Morgan Stanley Capital Group in advance for natural gas to be delivered to NCGA and then sold to SMUD pursuant to a long-term purchase contract. SMUD’s obligation under the purchase contract is limited to payment for gas supplies delivered by NCGA. SMUD’s payments under the purchase contract are payable from revenues of SMUD’s Electric System prior to the payment of principal and interest on the Senior Bonds and the Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution. SMUD is not obligated to make any payments in respect of debt service on the

NCGA bonds. As of December 31, 2023, related bonds in the aggregate principal amount of \$120,070,000 remain outstanding.

SMUD and Sacramento Municipal Utility District Financing Authority formed NCEA as a joint powers authority. NCEA is treated as a component unit of SMUD for accounting purposes. NCEA issued \$539,615,000 in bonds in December 2018 for the purpose of paying J. Aron & Company LLC in advance for natural gas or electricity to be delivered to NCEA and then sold to SMUD pursuant to a long-term purchase contract. SMUD’s obligation under the purchase contract is limited to payment for gas or electricity supplies delivered by NCEA. SMUD’s payments under the purchase contract are payable from revenues of SMUD’s Electric System prior to the payment of principal and interest on the Senior Bonds and the Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution. SMUD is not obligated to make any payments in respect of debt service on the NCEA bonds. [As of December 31, 2023, related bonds in the aggregate principal amount of 537,295,000 remain outstanding. As described in the forepart of this Official Statement, the bonds issued by NCEA in 2018 are expected to be refunded with proceeds of the Bonds (as defined in the forepart of this Official Statement).] [to be revised for 2024 Senior Bond offering documents]

Interest Rate Swap Agreements. SMUD has two interest rate swap agreements relating to previously or currently outstanding Subordinated Bonds, as shown in the following table. For more information, see Note 9 (Derivative Financial Instruments) to SMUD’s consolidated financial statements.

Effective Date	Termination Date	SMUD Pays		SMUD Receives	Notional Amount (000's)	Counterparty
7/2/1997	7/1/2024	Floating	SIFMA	5.154%	\$19,570	J Aron & Company LLC
07/12/2023	08/15/2041	Fixed	0.718%	[70% of 1M SOFR]	132,020	Barclays Bank

The obligations of SMUD under the swap agreements are not secured by a pledge of revenues of SMUD’s electric system or any other property of SMUD. SMUD does not currently have any collateral posting requirements with respect to the interest rate swap agreements, but SMUD may be required to post collateral under certain circumstances.

Build America Bonds Subsidy Payments. SMUD’s Electric Revenue Bonds, 2009 Series V (the “2009 Series V Bonds”) and Electric Revenue Bonds, 2010 Series W (the “2010 Series W Bonds”) were issued as “Build America Bonds” under the provisions of the American Recovery and Reinvestment Act of 2009. At the time the 2009 Series V Bonds and 2010 Series W Bonds were issued, SMUD expected to receive an annual cash subsidy payment from the United States Treasury equal to 35% of the interest payable on the 2009 Series V Bonds and the 2010 Series W Bonds. However, as a result of the federal budget process, many payments from the federal government, including Build America Bonds subsidy payments, have been reduced. Absent the federal budget reductions, the aggregate annual cash subsidy payable to SMUD with respect to the 2009 Series V Bonds and the 2010 Series W Bonds would be approximately \$9.8 million. With the current federal budget reductions, SMUD has typically been receiving aggregate annual cash subsidy payments with respect to the 2009 Series V Bonds and the 2010 Series W Bonds of approximately \$9.2 million. It is possible that future federal budget actions could further reduce, or eliminate entirely, the annual cash subsidy payments with respect to Build America Bonds, including the annual cash subsidy payments payable to SMUD with respect to the 2009 Series V Bonds and the 2010 Series W Bonds. SMUD cannot predict the likelihood of the further reduction or elimination of the Build America Bonds subsidy payments. A significant reduction or elimination of the cash subsidy

payments payable to SMUD with respect to the 2009 Series V Bonds or the 2010 Series W Bonds could be material. [Reference to 2024 Senior Bonds plan of finance to come]

Debt Service Requirements. The table on the following page sets forth SMUD’s debt service requirements with respect to SMUD’s Senior Bonds and Subordinated Bonds.

DEBT SERVICE REQUIREMENTS[TO BE CONFIRMED/UPDATED] ⁽¹⁾

Calendar Year	Senior Bonds Debt Service⁽²⁾	Subordinated Bonds Debt Service⁽³⁾	Total Debt Service
2024	\$ 179,657,209	\$ 11,684,323	\$ 191,341,531
2025	178,911,687	11,780,665	190,692,352
2026	179,010,287	8,447,772	187,458,059
2027	179,097,037	8,947,772	188,044,809
2028	179,208,038	8,948,211	188,156,249
2029	127,829,725	8,947,332	136,777,056
2030	137,903,979	9,781,105	147,685,083
2031	143,512,870	6,447,772	149,960,641
2032	143,353,133	6,948,211	150,301,344
2033	143,215,040	6,947,332	150,162,371
2034	137,669,794	18,587,534	156,257,327
2035	138,018,961	18,159,537	156,178,498
2036	138,370,189	17,729,456	156,099,645
2037	78,304,801	25,303,354	103,608,154
2038	77,946,301	25,618,890	103,565,191
2039	74,594,300	25,935,859	100,530,159
2040	74,393,300	26,254,804	100,648,104
2041	79,238,550	26,889,177	106,127,727
2042	49,163,850	28,490,000	77,653,850
2043	48,951,650	28,490,300	77,441,950
2044	48,747,750	28,490,350	77,238,100
2045	48,539,450	28,494,550	77,034,000
2046	43,129,500	28,492,150	71,621,650
2047	43,129,500	28,492,700	71,622,200
2048	43,134,750	28,490,450	71,625,200
2049	43,131,000	28,489,800	71,620,800
2050	43,134,500	--	43,134,500
2051	17,740,500	--	17,740,500
2052	17,739,250	--	17,739,250
2053	17,739,750	--	17,739,750
Total	\$2,854,516,645	\$501,289,405	\$3,355,806,050

(1) Does not include outstanding bonds issued by the Authorities for the Local Gas-Fired Plants. Does not include bonds issued by NCGA, NCEA or SMUD’s portion of bonds issued by TANC. Payments by SMUD which are used by the Authorities, NCGA, NCEA, and TANC to pay debt service on such bonds constitute either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution.

(2) Debt service is not reduced by the amount of any subsidy that SMUD currently expects to receive in connection with the 2009 Series V Bonds and 2010 Series W Bonds.

(3) Based on an assumed interest rate of 3% per annum following (i) the initial scheduled Mandatory Purchase Date of October 15, 2030 for SMUD’s Subordinated Electric Revenue Refunding Bonds, 2023 Series D and (ii) the initial scheduled Mandatory Purchase Date of October 15, 2025 for SMUD’s Subordinated Electric Revenue Bonds, 2019 Series B.

Note: Amounts may not add due to rounding.

INSURANCE

SMUD maintains a comprehensive property/casualty insurance program designed to protect against catastrophic losses that would have an adverse effect on its financial position or operational capabilities. Insurance programs are continuously reviewed and modified when construction, operational exposures, or developments in the insurance industry so warrant. Long term relationships with a variety of insurers minimize SMUD's susceptibility to the effects of market cycles. SMUD budgets reserves to meet potential insurance deductibles and self-insured liability claims.

SMUD safeguards assets with all-risk property and boiler/machinery insurance with limits of \$800 million per occurrence for physical damage and business interruption combined. Various coverage sublimits and deductibles apply to losses arising from certain perils, such as business interruption, earthquake, or flood, respectively. Liability insurance is in effect to defend and indemnify SMUD against third party claims, including general, automobile and sudden and accidental pollution claims with policy limits of \$140 million, and wildfire coverage with policy limits of \$275 million, all of which include a variety of self-insured retentions.

Nuclear property and liability insurance policies are maintained in accordance with the NRC's requirements for decommissioned nuclear plants that maintain dry storage of spent fuel on-site. This includes \$100 million in first party property damage and decontamination, \$100 million for nuclear liability arising from accidents on-site, \$200 million for supplier's and transporter's nuclear liability, and \$300 million for nuclear worker liability. SMUD is exposed to possible retrospective assessments for nuclear property events occurring at other nuclear facilities in the United States capped at ten times SMUD's annual nuclear property premium (currently the maximum retrospective assessment is approximately \$1,000,000).

Other types of insurance include non-owned aircraft liability, workers' compensation, crime, cyber security, fidelity, fiduciary liability, directors' and officers' liability, professional errors and omissions, transportation, and builder's risk for major facilities under construction.

LEGAL PROCEEDINGS

SMUD is a party to numerous actions arising out of the conduct of its business and affairs, some of which are discussed below. SMUD believes that any losses or adverse financial results it may suffer in these current actions, to the extent not covered by insurance, would not, in the aggregate, have an adverse material impact on SMUD, its business and affairs, or results of operations, financial position or liquidity.

Environmental Litigation

SMUD was one of many potentially responsible parties that had been named in a number of actions relating to environmental claims and/or complaints. SMUD has resolved these environmental claims and/or complaints and entered into settlement agreements and/or consent orders. These settlement agreements and consent orders have statutory reopener provisions which allow regulatory agencies to seek additional funds for environmental remediation under certain limited circumstances. While SMUD believes it is unlikely that any of the prior settlements or consent orders will be reopened, the possibility exists. If any of the settlements or consent orders were to be reopened, SMUD believes that the outcome will not have a material adverse impact on SMUD's financial position, liquidity, or results of operations.

Proposition 26 Lawsuit

In October 2019, two SMUD customers jointly filed a complaint against SMUD (subsequently one of the customers removed themselves from the complaint), which stated that SMUD's Board violated

Proposition 26 (see “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – Proposition 26” for a description of Proposition 26) when on June 24, 2019, it adopted rate increases for 2020 and 2021. The plaintiff contended the rate increases did not reflect SMUD’s reasonable cost of service because they included a 9.2% scalar that SMUD applies to its TOD residential rate restructure adopted by SMUD’s Board in the 2017 rate process. SMUD viewed the lawsuit as having little merit and while SMUD anticipated the court would rule in SMUD’s favor on substantive grounds, the plaintiff in early 2024 agreed to dismiss the lawsuit with prejudice due to their failure to diligently prosecute the case. On January 16, 2024, the court approved the dismissal.

On January 19, 2024, the same plaintiff, along with a second SMUD residential customer, jointly filed a new complaint challenging the September 21, 2023, SMUD Board adoption of 2024 and 2025 rate increases. The plaintiffs make a similar claim regarding the TOD scalar as the prior lawsuit. Given the little merit behind the lawsuit, SMUD believes the court will rule in its favor. However, SMUD is unable to predict the outcome of the case or, if or to the extent SMUD ultimately is not successful in the litigation, what remedies against SMUD may be available. SMUD believes that if it is not successful in the litigation, and to the extent the outcome would have a material adverse impact on SMUD’s financial position, liquidity, or results of operations, the Board would make appropriate rate modifications based on an evidentiary record consistent with guidance from a judicial decision in the case.

Other Litigation Matters

Currently, SMUD is party to various claims, legal actions and complaints relating to its operations, including, but not limited to, property damage, personal injury, contract disputes, and employment matters. SMUD believes that the ultimate resolution of these matters will not have a material adverse effect on SMUD’s financial position, liquidity, or results of operations.

FERC Administrative Proceedings

SMUD is involved in a number of FERC administrative proceedings related to the operation of wholesale energy markets, regional transmission planning, gas transportation and NERC reliability standards. These proceedings generally fall into the following categories: (i) filings initiated by the CAISO (or other market participants) to adopt/modify the CAISO Tariff and/or establish market design and behavior rules; (ii) filings initiated by existing transmission owners (i.e., PG&E and the other IOUs) to pass-through costs to their existing wholesale transmission customers; (iii) filings initiated by FERC on market participants to establish market design and behavior rules or investigate market behavior by certain market participants; (iv) filings initiated by transmission owners under their transmission owner tariffs to establish a regional transmission planning process; (v) filings initiated by providers of firm gas transportation services under the Natural Gas Act; and (vi) filings initiated by NERC to develop reliability standards applicable to owners, users, and operators of the bulk electric system. In addition, SMUD is an active participant in other FERC administrative proceedings, including those related to reliability, variable resource integration and the changing resource mix, and transmission planning and cost allocation. SMUD believes that determinations of these FERC proceedings will not have a material adverse effect on SMUD’s financial position, liquidity or results of operations.

CPUC Administrative Proceedings

Periodically, PG&E seeks to update its gas transmission and storage (“GT&S”) revenue requirements and rate designs. These applications are litigated at the CPUC and affect SMUD through several tariff rates SMUD pays to move natural gas along PG&E’s backbone transmission lines. In the 2019 GT&S rate case (the “2019 GT&S Case”), the CPUC affirmed the application in GT&S rates of cost causation principles to prevent excessive and unreasonable costs being shifted to electric generator

backbone customers like SMUD, either through proposed changes in PG&E’s natural gas storage strategy or through cost shifts within the electric generator customer class.

PG&E filed its 2023 General Rate Case (the “GRC”) in June 2021 which includes its gas transmission and storage revenue requirements. In September 2021, PG&E filed an application for approval of its Gas Cost Allocation and Rate Design Proposals (“CARD”). The CPUC issued a decision in the GRC in November 2023 authorizing PG&E’s revenue requirements for the four-year rate period of 2023-2026. SMUD is a party to the comprehensive all-party settlement agreement submitted to the CPUC for approval in June 2023 which, if approved, would resolve all open issues in the CARD proceeding. SMUD does not believe that determinations of these CPUC proceedings will have a material adverse effect on SMUD’s financial position, liquidity or results of operations. SMUD will continue to actively participate in PG&E’s GRC and CARD proceedings to ensure that costs are fairly allocated to non-core customers, including electric generator backbone customers.

In the GRC, the CPUC directed PG&E to submit an application to revise its natural gas curtailment procedures “similar to the curtailment procedures of other large energy utilities”. SMUD will actively participate in this future proceeding.

Separately, SMUD continues to participate and monitor a proceeding at the CPUC concerning long-term gas system planning. At this point in these proceedings, SMUD does not anticipate that the ultimate resolution of such cases will have a material adverse effect on SMUD’s financial position, liquidity, or results of operation.

SMUD monitors a number of other CPUC proceedings. These proceedings generally fall into the following categories: (i) filings initiated by PG&E to adopt/modify its tariffs and/or rules; (ii) rulemakings initiated by the CPUC to establish market design and behavior rules or program rules affecting SMUD customers; and (iii) rulemakings initiated by the CPUC to establish electric and/or gas system safety design and maintenance rules. SMUD believes that determinations of these CPUC proceedings will not have a material adverse effect on SMUD’s financial position, liquidity or results of operations.

DEVELOPMENTS IN THE ENERGY SECTOR

California Electric Market

In 1996, the State partially deregulated its electric energy market and the CAISO was established in 1998. Since the CAISO’s formation, the State has experienced episodes of higher and more volatile prices for natural gas and wholesale electricity. In reaction to such conditions, SMUD made significant changes to its business strategy to mitigate the impacts of the more volatile and unpredictable energy markets. Volatility in energy prices in the State are always a potential risk due to a variety of factors which affect both the supply and demand for electricity in the western United States. These factors include, but are not limited to, the implementation of the CAISO market design changes, insufficient generation resources, the increase in intermittent renewable energy resources, natural gas price volatility, fuel costs and availability, weather and natural disasters, transmission constraints and levels of hydroelectric generation within the region. While SMUD has taken a number of steps to mitigate its exposure to price volatility associated with these factors, this price volatility under extreme conditions may contribute to greater volatility in SMUD’s net revenues from the purchase and sale of electric energy and, therefore, could materially adversely affect the financial condition and liquidity of SMUD. For a discussion of SMUD’s current resource planning activities and risk management strategies, see “BUSINESS STRATEGY” above.

Cybersecurity

Cybersecurity continues to be a top priority for SMUD. Attacks or threats directed at critical electric or energy sector operations could damage or cause the shut-down of generation, transmission or distribution assets that are essential to SMUD's ability to serve its customers, cause operational malfunctions and outages affecting SMUD's electric system, and result in costly recovery and remediation efforts. The costs of security measures or of remedying breaches could be material.

SMUD participates in sharing and receiving information about cyber security threats in real-time through the Electricity Information Sharing and Analysis Center ("E-ISAC"), the central hub for such data to actively manage risk related to potential cyber intrusion. SMUD also participates in NERC's development of mandatory, enforceable cyber security standards to address vulnerabilities in electric utility systems. SMUD also adopts voluntary measures suggested as best practices by the National Institute of Standards and Technology ("NIST") in its national framework.

SMUD's prudent response to this ever-changing threat requires constant monitoring and frequent updates to implement new regulatory requirements as they are developed. SMUD manages risk related to frequently changing regulatory requirements by participating in the development of standards at NERC and NIST and through active engagement in the cyber security policy dialogue in Congress.

Physical Security

Physical security is a critical concern for electric utilities as they seek to protect their infrastructure from a range of threats. The electric utility infrastructure is complex and consists of multiple components, such as power plants, substations, transmission and distribution lines, and other facilities. SMUD employs a dedicated physical security team that is deployed 24/7 and allows SMUD to respond to emergent events in a safe, coordinated, efficient, and cohesive manner, protecting the lives of its employees, customers, community, properties and assets. SMUD has policies, processes and procedures in place that outline the access controls and restrictions for its properties. SMUD restricts access based on need as it determines, while adhering to applicable laws, regulations and standards such as NERC Reliability Standards and NRC regulations. SMUD also maintains a Utility Security Plan adopted by the Board representing SMUD's compliance with the CPUC's Safety and Enforcement Division six-step security plan process described in CPUC Decision 19-01-018.

During times of elevated, imminent threats, safety and/or security concerns, SMUD's Security Operations team, under the direction of the Chief Financial Officer or delegate, reserves the right to deploy additional security measures, controls, and further restrict or limit access to its properties to increase its security posture.

SMUD operates a 24/7 security operations center which monitors and coordinates responses to situations reported by internal and external stakeholders, or which are detected by SMUD's security technology. The technology includes access control, video surveillance, and various types of intrusion detection solutions. The security operations center is a central hub for initial contact for physical security calls from employees of suspicious events and initiates incident responses as needed.

Federal Legislation and Regulatory Proceedings

Energy Policy Act of 2005. On August 8, 2005, the Energy Policy Act of 2005 (the "EPAct of 2005") was signed into law. The law includes a number of energy-related provisions, including among other things limited FERC jurisdiction over interstate transmission assets of municipal utilities, cooperatives and federal utilities to order these entities to provide transmission services on rates and terms

comparable to those the entities charge and provide to themselves; the grant of authority to FERC to establish and certify an electric reliability organization to develop and enforce reliability standards for users of the bulk power transmission system; and prohibitions of certain market practices including the provision of false information and related expansion of FERC civil and criminal penalty authority. So far, the most visible impact of the EAct of 2005 on SMUD has been the development of mandatory federal reliability standards.

Federal Regulation of Transmission Access. The Energy Policy Act of 1992 (the “Energy Policy Act”) made fundamental changes in the federal regulation of the electric utility industry, particularly in the area of transmission access. The Energy Policy Act provided FERC with the authority to require a transmitting utility to provide transmission services at rates, charges, terms and conditions set by FERC. The purpose of these changes, in part, was to bring about increased competition in the electric utility industry. Under the Energy Policy Act, electric utilities owned by municipalities and other public agencies which own or operate electric power transmission facilities which are used for the sale of electric energy at wholesale are “transmitting utilities” subject to the requirements of the Energy Policy Act.

Since the Energy Policy Act, FERC has adopted a series of rules to implement competitive open access to transmission facilities and regional transmission planning. Order No. 888, issued in 1996, requires the provision of open access transmission services on a nondiscriminatory basis by all “jurisdictional utilities” (which, by definition, does not include municipal entities like SMUD) by requiring all such utilities to file OATTs. Order No. 888 also requires “nonjurisdictional utilities” (which, by definition, does include SMUD) that purchase transmission services from a jurisdictional utility under an open access tariff and that owns or controls transmission facilities to provide open access service to the jurisdictional utility under terms that are comparable to the service that the nonjurisdictional utility provides itself. Section 211A of the EAct of 2005 authorizes, but does not require, FERC to order unregulated transmission utilities to provide transmission services, including rates and terms and conditions, that are comparable to those under which the unregulated transmitting utility provides transmission services to itself that are not unduly discriminatory or preferential – often referred to as the reciprocity rule.

In Order 890, issued in 2007, FERC stated that it will implement its authority under Section 211A on a case-by-case basis and retain the current reciprocity provisions.

In 2011, FERC issued Order 1000, which among other things requires public utility (jurisdictional) transmission providers to participate in a regional transmission planning process that produces a regional transmission plan and that incorporates a regional and inter-regional cost allocation methodology. Similar to Order 890, FERC states that it will implement its authority under Section 211A on a case-by-case basis. However, in Order 1000, FERC appears to expand upon the current reciprocity provisions and states that it has the authority to allocate costs to beneficiaries of services provided by specific transmission facilities even in the absence of a contractual relationship between the owner of the transmission facilities and the identified beneficiary.

SMUD, individually, and through the Large Public Power Council (“LPPC”), appealed Order 1000, but in 2014 the D.C. Circuit Court of Appeals rejected all of the arguments raised on appeal, upholding the entirety of Order 1000.

The jurisdictional members of WestConnect filed their proposed regional planning process and cost allocation methodology through a series of compliance filings at FERC. FERC accepted binding cost allocation for jurisdictional transmission providers of WestConnect and mandated that non-jurisdictional transmission providers (such as SMUD) identified as beneficiaries of a project have the ability to not accept the cost allocation. WestConnect’s Order 1000 planning process began with the 2016-2017 planning cycle.

However, in response to FERC’s WestConnect orders on compliance, El Paso Electric Company (“El Paso”), a jurisdictional transmission provider, petitioned to the Court of Appeals for the 5th Circuit. El Paso contends that FERC’s WestConnect orders violate Order 1000’s cost causation principle because WestConnect’s binding cost allocation applies only to the jurisdictional transmission providers and thus forces jurisdictional transmission providers to subsidize projects benefitting non-jurisdictional transmission providers that opt-out of projects. The non-jurisdictional transmission providers agreed on a settlement with the jurisdictional transmission providers to resolve the matters on appeal in the 5th Circuit, but FERC ultimately did not accept the settlement. On August 2, 2023, the court reversed FERC’s orders implementing Order No. 1000 for WestConnect concerning cost allocation of regional transmission projects to non-jurisdictional transmission providers. The court found that the WestConnect orders are incompatible with Order No. 1000’s application of the cost causation principle to address free ridership. There is uncertainty at this time on the future of WestConnect’s regional planning process. FERC has not yet acted on its own in light of the Fifth Circuit’s decision, and it is uncertain whether it will act while it is working on an updated transmission planning and cost allocation proposal that would change the Order 1000 process (as further discussed below regarding the April 21, 2022 Notice of Proposed Rulemaking). It is also uncertain if and/or the extent to which the jurisdictional transmission providers in WestConnect will file revisions to the regional transmission planning provisions in their OATTs. In the meantime, the WestConnect planning has continued under the existing framework and SMUD, along with the other non-jurisdictional transmission providers, continue to participate in the WestConnect process. SMUD’s long-standing objective is to comply with open access requirements necessary to achieve reciprocity, including through participation in a regional planning process while not binding itself to mandatory cost allocation. Thus, SMUD has an interest in continuing to explore options for participation in a regional transmission planning process if the WestConnect rules no longer permit SMUD to reasonably participate consistent with its business and jurisdictional interests.

SMUD is unable to predict at this time the full impact that Order 1000, or the 5th Circuit’s August decision, will have on the operations and finances of SMUD’s electric system or the WestConnect region generally. However, WestConnect has conducted multiple planning cycles under its Order 1000 planning process and has not identified any project eligible for cost allocation. SMUD will continue to take any action necessary, including withdrawing from a cost allocation determination or planning region, and engaging in FERC proceedings, to ensure that it is not required to pay for transmission costs in the absence of an agreement or service relationship.

On April 21, 2022, FERC issued a Notice of Proposed Rulemaking on Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection (the “NOPR”). The NOPR seeks input on proposals that would impact the Order 1000 planning and cost allocation process. SMUD has been engaged in the proceeding, providing input and helping draft comments with trade organizations, including LPPC. FERC has not issued any subsequent order. SMUD will continue to monitor and be engaged in any developments at FERC that impact the Order 1000 process and its regional transmission planning participation.

NERC Reliability Standards. The EPAct of 2005 required FERC to certify an electric reliability organization (“ERO”) to develop mandatory and enforceable reliability standards, subject to FERC review and approval. On February 3, 2006, FERC issued Order 672, which certified NERC as the ERO. Many reliability standards have since been approved by FERC, including those aimed at protecting the bulk electric system from physical and cyber threats.

The ERO or the regional entities, such as WECC, may enforce the reliability standards, subject to FERC oversight or FERC may independently enforce reliability standards. Potential monetary sanctions include fines of up to \$1,544,521 per violation per day. Order 693 provides ERO and regional entities with

the discretion necessary to assess penalties for such violations, while also having discretion to calculate a penalty without collecting the penalty if circumstances warrant.

Anti-Market Manipulation Rules. EPCRA of 2005 gave FERC the authority to issue rules to prevent market manipulation in jurisdictional wholesale power and gas markets, and in jurisdictional transmission and transportation services. These anti-market manipulation rules apply to non-jurisdictional entities such as SMUD. Further, EPCRA of 2005 provided FERC civil penalty authority, which the Commission has stated that it will exercise carefully by assuring that its market manipulation rules are clear.

Greenhouse Gas Emissions. Since 2009, the United States Environmental Protection Agency (the “EPA”) has taken steps to regulate GHG emissions from different sources, including from the electric sector.

In 2014, EPA issued a proposed rule under section 111(d) of the Clean Air Act (“CAA”) called the Clean Power Plan (the “CPP”) that projected power sector emissions reductions of 30% below 2005 levels by 2030. The proposed CPP would have established a rate-based emissions goal for each state, providing states the responsibility to develop a State Implementation Plan (“SIP”) describing how each will meet the goal assigned by EPA using the “Best System of Emissions Reduction” (“BSER”) established by EPA. The rule was finalized in October 2015.

In November 2015, 27 states and numerous corporations challenged the CPP in court, alleging that EPA had exceeded its authority under the CAA; however, before the issue could be decided by the court, the 2016 presidential election resulted in a change of administration. The new administration quickly moved for an abeyance (or stay) of the case for as long as the agency needed to review and withdraw the CPP. The U.S. Supreme Court stayed implementation of the CPP pending disposition in the D.C. Circuit and any subsequent review by the Supreme Court. In August 2018, EPA proceeded to withdraw the CPP and the D.C. Circuit ultimately dismissed the case on September 17, 2019. EPA proposed a different rule under the same provision of the CAA, known as the Affordable Clean Energy (“ACE”) rule, which would have established a BSER that only includes measures that can be undertaken at an individual power plant, rather than the broader suite of measures envisioned under the CPP. The ACE rule was challenged in court by environmental groups and states alleging that the revised rule inadequately responds to EPA’s responsibility to protect public health and welfare. SMUD joined in this litigation along with other challengers. The D.C. Circuit vacated the ACE rule on January 19, 2021, and remanded it to the EPA for review and revision, just days before a new presidential administration took office. Several states led by West Virginia and coal industry members appealed the decision.

In June 2022, the U.S. Supreme Court issued its opinion in *West Virginia v. EPA*, striking down the CPP and foreclosing any future regulations of “significant political and economic significance” if Congress has not expressly authorized them. While the decision does not restrict EPA to only requiring measures “inside the fence line” at an individual power plant to control GHGs, it appears unlikely that the EPA will be able to require material reductions in GHGs to mitigate climate change through section 111(d) of the CAA.

Under the new presidential administration, in May 2023, the EPA issued a proposed rule under Section 111(d) of the CAA to reduce GHG emissions from existing and new power plants. The four-part proposed rule, *New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule*, would set forth GHG emission standards for certain subcategories of new and existing fossil fuel-fired power plants operating greater than 50% of the time and generating more than 300 MW per turbine. In the proposed rule, EPA determined the BSER is either deploying carbon capture and storage

technology to capture 90% of emissions or co-firing 96% hydrogen produced through a low-emission process (“low-GHG hydrogen”). If finalized, compliance is required by 2032. SMUD has filed comments as part of several trade groups and coalitions in response to the proposed rule. SMUD’s internal analysis shows the rule as proposed would not require changes at any of its currently-operating fossil-fueled power plants and therefore will not have a material impact on SMUD’s financial position, operations, or liquidity.

Federal Communications Commission

The 1978 Pole Attachment Act added section 224 to the Communications Act of 1934, authorizing the Federal Communications Commission (“FCC”) to regulate attachments by cable television systems or providers of telecommunications service to utility poles, ducts, conduits, and rights-of-way. Under Section 224(a)(1), public power entities are exempt from FCC pole attachment regulations, as municipally-owned poles are already subject to local decision-making processes and governance. The municipal exemption from FCC pole attachment regulations was further codified through the enactment of the Telecommunications Act of 1996. However, over the past decade, this exemption has been continuously eroded.

Various actions by the FCC have limited the exemption in support of a “uniform policy for broadband access to privately-owned physical infrastructure.” Through four orders issued between 2017 and 2018, the FCC set strict time limits for the review of pole attachment applications and preempted state and local agreements on pole attachments. In 2020, in *City of Portland v United States*, the U.S. Court of Appeals for the Ninth Circuit upheld the FCC’s Small Cell Order, which adopted new time limits for municipal utilities’ review of wireless infrastructure siting applications and preempted access fees for small cells. In November 2023, the FCC adopted its Fourth Report and Order, Declaratory Ruling, and Third Further Notice of Proposed Rulemaking that would reform pole replacement rules and facilitate the approval process for pole attachment applications, among other things. SMUD will monitor this proceeding for any potential impact to SMUD.

SMUD is unable to predict whether any new FCC rulemakings will impact the operations and finances of SMUD’s electric system.

Federal Clean Energy Legislation. SMUD actively participates in discussion at the federal level regarding legislation that would meaningfully impact SMUD’s existing GHG reduction strategies or impose new requirements for electric generators, including a proposed federal clean energy standard. In the 117th Congress, a clean electricity performance program was considered but ultimately lacked support to pass. Instead, Congress extended and expanded clean energy tax credits and created new grant and rebate programs to incentivize clean energy investments in the Inflation Reduction Act of 2022. While it is possible that a future Congress may revisit the concept of a clean energy standard or other GHG reduction regime, it is possible that the passage of the Inflation Reduction Act will diminish the likelihood of a new regulatory framework being enacted in the near future.

SMUD is unable to predict whether any new EPA rulemakings will be undertaken, and what the full impact of the reduction of fossil-based generation over time will have on the operations and finances of SMUD’s electric system or the electric utility industry generally.

State Legislation and Regulatory Proceedings

A number of bills affecting the electric utility industry have been enacted by the State Legislature. In general, these bills provide for reduced GHG emission standards and greater investment in energy efficient and environmentally friendly generation alternatives through more stringent RPS. Additionally, ongoing regulatory proceedings address the implementation of these bills as well as water flow and quality

issues related to the Sacramento – San Joaquin River Delta. The following is a brief summary of these bills and regulatory proceedings.

Greenhouse Gas Emissions. On September 27, 2006, the Governor of the State signed into law AB 32, the Global Warming Solutions Act of 2006 (“AB 32”). AB 32 requires the California Air Resources Board (“CARB”) to adopt enforceable GHG emission limits and emission reduction measures in order to reduce GHG emissions to 1990 levels by 2020. In addition, AB 32 establishes a mandatory reporting program for all IOUs, local, publicly-owned electric utilities and other load-serving entities (electric utilities providing energy to end-use customers) (“LSEs”). The AB 32 reporting program allows CARB to adopt regulations using market-based compliance mechanisms such as a “cap-and-trade” system.

On December 16, 2010, CARB approved a resolution adopting cap-and-trade regulations for the State. The regulations became effective on January 1, 2012. As adopted, the cap-and-trade program covers sources accounting for 85% of the State’s GHG emissions, the largest program of its type in the United States. In November of 2012, CARB conducted its first allowance auction and auctions now occur on a quarterly schedule.

The cap-and-trade program introduced a hard emissions cap that declines over time on the combined electric utility and large industrial sectors, covering all sources emitting more than 25,000 metric tons of carbon dioxide-equivalent greenhouse gases (“CO₂e”) per year, and was subsequently expanded to cover distributors of transportation, natural gas, and other fossil fuels. The cap-and-trade program requires covered entities to retire compliance instruments (allowances and carbon offsets) for each metric ton of CO₂e they emit. CARB has allocated free allowances to LSEs to mitigate the compliance cost burden on ratepayers. The value of allowances must be used to benefit ratepayers and achieve GHG emission reductions. The cap-and-trade program also allows covered entities to use offset credits for compliance purposes (not exceeding 8% of a regulated entity’s compliance obligation through 2020, 4% from 2021 through 2025, and 6% from 2026 through 2030). Offsets must be obtained from certified projects in sectors that are not regulated under the cap-and-trade program and are subject to other restrictions.

The State's cap-and-trade program was briefly linked to companion program in the Canadian province of Ontario during 2018 but was de-linked following a political change. In 2021, the Washington state legislature passed a cap-and-trade bill, which is expected to interact with the State’s markets. Future potential near-term links to the CARB cap-and-trade program also include the states of Oregon, which has adopted a cap-and-trade program, and New Mexico, which is considering the adoption of a cap-and-trade program.

On October 7, 2015, SB 350 was enacted, containing aggressive goals for reducing carbon emissions by 2030, including raising the proportion of renewable energy to 50%, reducing the use of petroleum fuel in cars and trucks by up to 50%, and doubling the energy efficiency of existing buildings. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*” for additional information. In addition, SB 350 established requirements for larger POUs to adopt and file with the CEC Integrated Resource Plans (“IRPs”) by April 2019 that would show planned procurement to achieve the 50% RPS and State GHG goals established by CARB. The CEC developed “guidelines” for these IRPs for POUs in 2017, updated them in 2018, and proposed additional updates in 2022. CARB established specific GHG target ranges for these IRPs in summer 2018, which were revised in 2023 following the adoption of CARB’s 2022 Scoping Plan. SMUD developed and adopted an IRP in 2018 through a comprehensive public process and filed the adopted IRP with the CEC in April 2019. SMUD adopted an updated IRP in June 2022 and filed the updated IRP with the CEC in September 2022, but the CEC has not yet completed its review of SMUD’s 2022 IRP. SMUD’s updated IRP plans for a greater than 92% reduction in GHG emissions by 2030 relative to 1990 levels, which equals approximately

250,000 metric tons of GHG emissions in 2030. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*.”

On April 29, 2015, the Governor of the State signed Executive Order B-30-15, establishing a goal for the State to reduce GHG emissions to 40% below 1990 levels by 2030. In 2016, the State Legislature passed Senate Bill 32 (“SB 32”), which codified then-Governor Brown’s goal of reducing the State’s GHG emissions to 40% below 1990 levels by 2030. In 2017, the State Legislature passed Assembly Bill 398 (“AB 398”), explicitly authorizing the continuation of the cap-and-trade program, with designated changes, through 2030. Subsequently, CARB adopted an initial set of regulatory changes extending the cap-and-trade program, including establishing utility sector allowance allocations through 2030. In 2018, CARB completed a rulemaking to implement the cap-and-trade program changes designated by AB 398. These changes include development of a hard price ceiling for the cap-and-trade program and two price-containment points below that ceiling, in an attempt to ensure stable prices in the program. CARB adopted final regulations on December 13, 2018.

In addition, any new projects constructed in the State, including power plants, that may cause a significant adverse impact on the environment must be analyzed under CEQA. Some State agencies have begun using CEQA in novel ways to require mitigation of “significant” GHG emissions caused, either directly or indirectly, by a project. Pursuant to Senate Bill 97 passed in 2007, CARB will assist the Governor’s Office of Planning and Research in setting thresholds of significance under CEQA of GHG impacts from new projects. This is an area of State law that is evolving and untested in the courts. However, there is a risk that any project proponent of an electric system infrastructure project might have to mitigate such potential impacts to a level of less than significant.

On December 3, 2012, the Superior Court issued a ruling in *Cleveland National Forest Foundation v. San Diego Association of Governments* (“SANDAG”), Case No. 2100-00101593, that sided with the State Attorney General and the other petitioners stating that SANDAG did not follow CEQA when it adopted a \$257 billion regional transportation plan in 2011. The ruling expressly invalidated the certification of the Environmental Impact Report (“EIR”) on the grounds that the EIR should have analyzed the plan’s consistency with the governor’s policy goal to reduce GHG emissions by 80% by 2050 as articulated in the 2005 Executive Order S-03-05. On November 24, 2014, the Fourth Appellate District upheld the trial court in a published decision, and SANDAG appealed to the State Supreme Court. On July 13, 2017, the Supreme Court reversed and held that SANDAG’s decision not to adopt the 2050 goal was not an abuse of discretion. Nevertheless, the Court articulated three clear principles for agencies to follow in their CEQA review of planning documents: 1) agencies must take seriously the significance of even small increases in GHG emissions; 2) they must consider science-based State policy guidance in their decision-making; and 3) they are required to use the best scientific information available to determine whether their planning decisions are consistent with the State’s goals. These principles will apply to SMUD in CEQA reviews of future projects.

On September 29, 2006, the Governor of the State signed into law Senate Bill 1368 (“SB 1368”), the GHG Emissions Performance Standard (“EPS”). SB 1368 limits long-term investments in baseload generation by the State’s utilities to power plants that meet an EPS jointly established by the CEC and the CPUC. The agencies have set the EPS at 1,100 pounds CO₂ per MWh, which is roughly half of the CO₂ emissions rate of a conventional coal-fired power plant. CEC regulations to implement the law for POU’s were approved by the Office of Administrative Law on October 16, 2007.

SMUD’s primary supply and demand-side resources need to meet customers’ electricity usage patterns over the next 10 years. Currently there is a ban in the State that prohibits the development of nuclear power plants until there is a permanent storage solution for spent fuel rods. With the effective ban on new coal power imports under SB 1368, natural gas-fired, combined cycle power plants would appear

to be the primary viable option for fossil fuel-based baseload power plant development absent the implementation of new technologies in connection with other resource options. The reliance on a single fuel source will continue to put pressure on the natural gas market in the United States. SMUD has in place a natural gas procurement plan to mitigate natural gas volatility, see “POWER SUPPLY AND TRANSMISSION – Fuel Supply” above.

On September 16, 2022, the Governor of the State signed into law SB 1020, which creates interim climate targets under which eligible renewable energy resources and zero-carbon resources must supply 90% of all retail sales of electricity to California end-use customers by December 31, 2035, and 95% by December 31, 2040. The bill also requires each State agency to ensure that zero carbon resources and eligible renewable energy resources supply 100% of electricity procured on its behalf by December 31, 2035. SMUD provides electricity to a number of State agency buildings and will work with State agencies to comply with this requirement.

On October 7, 2023, the Governor of the State signed into law AB 1305, which requires an entity that purchases or uses voluntary carbon offsets and makes claims regarding the achievement of net zero, or other similar claims, to disclose on their website specified information. Many stakeholder groups are raising questions on if this includes RECs. Clean-up legislation could follow. It is not clear at this time whether RECs are included.

Reliability. On June 30, 2022, the Governor signed the 2022-23 budget, along with a number of trailer bills, which provide implementing details on the budget line items. Included in AB 205, the energy trailer bill, are a number of reliability programs.

1. CEC Distributed Electricity Backup Assets Program to incentivize the construction of cleaner and more efficient distributed energy assets that would serve as on-call emergency supply or load reduction for the state’s electrical grid during extreme events. The CEC adopted program guidelines in October 2023 and issued the first solicitation in December 2023.
2. CEC Demand Side Grid Support Program to pay customers to reduce demand during stressed grid events. SMUD has actively engaged the CEC on the development and subsequent revision of program guidelines. The CEC is expected to revise the guidelines again for summer 2024.
3. DWR Strategic Reliability Reserve to secure resources for summer reliability or to preserve the option to extend the life of facilities that otherwise would retire, new temporary generators of more than five MW, new energy storage systems of at least 20 MW, generation facilities that use clean, zero-emission fuel technologies, or new zero-emission technologies that can be operational by December 31, 2026.

As a follow up to this legislation, the Governor signed into law AB 1373. The bill authorizes the CEC to annually assess a capacity payment on a POU within the CAISO balancing authority area during a month in which the POU fails to meet its minimum planning reserve margin. This does not include SMUD, who is within the BANC balancing authority area. SMUD is, however, required to submit to the CEC an assessment of whether it exceeded, met, or failed to meet its minimum planning reserve margin and system resource adequacy requirements. This bill also allows the DWR, for certain types of long-development projects, to act as a central procurement entity. For POUs, participation in the DWR program would be optional.

Zero-Emission Fleet Mandates. CARB has adopted the Advanced Clean Fleets (“ACF”) regulation, requiring certain medium- and heavy-duty (“MHD”) vehicle fleets to transition to zero-emission vehicles through purchase requirements or fleet composition requirements, which took effect on November

1, 2023, and applies to all publicly owned MHD fleets, larger commercially owned MHD fleets, and drayage trucks. Under the ACF Rule, public fleets like SMUD have two compliance options. The first is a zero-emission vehicle (“ZEV”) purchase requirement, under which 50% of annual MHD vehicle purchases would need to be ZEVs starting January 1, 2024, and 100% of annual MHD vehicle purchases would need to be ZEVs starting January 1, 2027. The second is an optional ZEV milestone option, under which the composition of the MHD fleet would need to meet certain ZEV percentages starting in 2025, with the entire fleet transitioned no later than 2042. The individual milestones depend on the number and category of vehicles in the fleet. Public fleets may opt into the ZEV milestone option until January 1, 2030. In 2024, SMUD plans to comply with the purchase requirement option, meaning that 50% of the MHD vehicles SMUD purchases in 2024 will be ZEVs. SMUD plans to monitor ZEV market developments and currently expects to opt into the ZEV milestone option as more ZEVs become available. The ACF Rule also accelerates a manufacturer ZEV sales requirement to 100% of all MHD truck sales by the 2036 model year.

CARB proposed the Zero-Emission Forklift regulation in November 2023. The regulation would require forklift fleets to transition spark-ignited forklifts to zero-emission technology starting in 2026. The regulation would apply to SMUD, as a forklift operator. Since SMUD has a limited number for forklifts, this regulation is not expected to have a material effect on SMUD’s financial position, liquidity, or results of operation.

Transportation and Building Electrification. In recent years, the State has identified transportation and building electrification as key strategies to reduce greenhouse gas emissions and improve air quality, and is advancing policy to support or accelerate electrification. For example, in addition to the zero-emission fleet mandates and LCFS regulation discussed herein, CARB adopted the Advanced Clean Cars II and Advanced Clean Trucks regulations to require vehicle manufacturers to increase sales of zero-emission cars and trucks, respectively. The CEC’s Building Energy Efficiency Standards are increasingly encouraging the use of electric heat pumps in new homes and certain non-residential buildings across the state. The draft 2025 Energy Standards, which are expected to be proposed by April 2024 and adopted by August 2024, would establish prescriptive heat pump requirements for both space and water heating in new homes, and may require existing homes to install a heat pump when replacing an air conditioner. The 2025 Energy Standards, if approved, would take effect on January 1, 2025. In addition, the State has also provided funding for programs to encourage clean transportation and building electrification.

Increases in transportation and building electrification will result in increased customer usage of electricity.

Renewables Portfolio Standard. Senate Bill 100 was passed by the Legislature and approved by Governor Brown on September 10, 2018. Among other requirements, the bill sets a 50% RPS target for 2026 and sets compliance period targets at 44% by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. The bill also creates a statewide planning goal to meet all of the state’s retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045.

Sacramento-San Joaquin River Bay-Delta Processes. The Sacramento-San Joaquin River Delta is an expansive inland estuary, formed at the western edge of the California Central Valley by the confluence of the Sacramento and San Joaquin rivers (“Delta”). There are two substantial Delta planning processes with the potential to affect (1) energy available for SMUD’s purchase from the Central Valley Project (“CVP”) and (2) flows within the Upper American River watershed. These processes are called the Bay-Delta Water Quality Control Plan (“Bay-Delta Plan”) and the Delta Conveyance Project.

The Bay-Delta Water Quality Control Plan is updated periodically by the State Water Resources Control Board (“SWRCB”), the last time being in 2006. The current Bay-Delta Plan update process is being implemented in four phases. The first phase considered southern Delta water quality, with a

significant focus on San Joaquin River tributaries. Phase 2, which is initially being addressed by a document under development by SWRCB staff, will address Sacramento River tributaries and various flow related issues, including the critically important one of those tributaries' contribution to Delta outflow. Phase 3 will concern changes to water rights needed to implement Phase 2. A substantial change in Delta outflow requirements could have a major impact on the timing of hydroelectric energy generation by the CVP. SMUD has a long-term agreement with WAPA to purchase some of this power (see "POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – *Western Area Power Administration*"). On July 18, 2018, the SWRCB released an updated Framework document signaling its staff's intent to propose Delta outflow requirements of 45–65% unimpaired flows for the Sacramento River tributaries (which includes the American River, the upper portions of which are where the UARP sits), though the report will analyze requirements of 35–75%. If these criteria were implemented, they could cut CVP generation by 50 to 63%. Governor Newsom has urged the SWRCB, other agencies and affected parties to execute voluntary agreements (aka the "Healthy Rivers Agreements") to address species' needs and outflow requirements. Although the negotiations have been slow, it is expected they will eventually result in a reasonable compromise. However, in September 2023 the SWRB released a Staff Report/Substitute Environmental Document in Support of Potential Updates to the Bay-Delta Plan (the "Staff Report/Substitute Environmental Document") to justify the adoption of the unimpaired flow standard as set forth in the 2018 Framework document. Numerous public entities, including SMUD, filed comments stating that, among other things, the potential updates identified in the Staff Report/Substitute Environmental Document, if adopted, would violate the Porter-Cologne Water Quality Control Act and Article X, section 2 of the California Constitution, would not improve fish and wildlife, and would not reasonably protect all beneficial uses, including water supplies for millions of Californians and hydroelectric power generation that is essential to California's resilient energy grid. Moreover, the comments filed also stated that the Staff Report/Substitute Environmental Document does not comply with CEQA because, among other things, the analysis of the proposed inflow and habitat objectives' impacts on electrical peaking generation, and more generally electrical grid reliability, is not supported by substantial evidence and fails to satisfy informational requirements. In addition, the comments maintain that the Healthy Rivers Agreements are a superior approach to achieving the goal of maximizing both environmental and other beneficial uses. If the unimpaired flow standard is adopted and the Healthy Rivers Agreements do not come to fruition, SMUD plans to fully participate in all regulatory and legal proceedings to argue for consideration and minimization of impacts to hydropower generation. SMUD will assess the potential impacts of proposed modifications to the present outflow objectives on SMUD's operations once, or if, the SWRCB makes available information with enough specificity for SMUD to conduct the relevant modeling.

In July 2022, the DWR released a Draft Environmental Impact Report ("EIR") to evaluate the potential impacts of carrying out the Delta Conveyance Project; the U.S. Army Corps of Engineers released a separate Environmental Impact Statement to evaluate the effects of the project pursuant to the National Environmental Policy Act. The Delta Conveyance Project is expected to entail construction of two intakes on the Sacramento River that will carry water to a main tunnel to the California Aqueduct for delivery south of the Delta. The Delta Conveyance Project may pose the potential to exacerbate impacts to already imperiled aquatic species, and in turn could have indirectly prompted regulatory agencies to require third parties, such as SMUD, to compensate by making changes to their operations. The Bureau of Reclamation is not a party to the Delta Conveyance Project, which should eliminate the potential for CVP power to be used to supply Delta Conveyance Project pumps. SMUD will monitor the proceedings and participate as necessary to ensure any impacts to SMUD interests are minimized, including potentially filing a challenge to the water rights DWR would need to modify in order to carry out the project.

Proposition 26. Proposition 26 was approved by the electorate on November 2, 2010 and amends Article XIII A and Article XIII C of the State Constitution. Proposition 26 imposes a two-thirds voter approval requirement for the imposition of fees and charges by the State, unless the fees and charges are expressly excluded. It also imposes a majority voter approval requirement on local governments with

respect to fees and charges for general purposes, and a two-thirds voter approval requirement with respect to fees and charges for special purposes, unless the fees and charges are expressly excluded. The initiative, according to its supporters, is intended to prevent the circumvention of tax limitations imposed by the voters pursuant to Proposition 13, approved in 1978, and other measures through the use of non-tax fees and charges. Proposition 26 expressly excludes from its scope a charge imposed for a specific local government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable cost to the local government of providing the service or product. Proposition 26 is not retroactive as applied to local governments. Although SMUD believes that the initiative was not intended to apply to fees for utility services such as those charged by SMUD and its fees and charges meet the criteria of the exclusion described above, it is possible that Proposition 26 could be interpreted to further limit fees and charges for electric utility services and/or require stricter standards for the allocation of costs among customer classes. SMUD is unable to predict at this time how Proposition 26 will be interpreted by the courts or what its ultimate impact will be. As of the date of this Official Statement, SMUD is unaware of any fees or charges relating to SMUD's service that would have to be reduced or eliminated because of Proposition 26. However, certain of SMUD's adopted rate increases have been challenged. See "LEGAL PROCEEDINGS – Proposition 26 Lawsuit."

Initiative 1935. A voter initiative entitled "The Taxpayer Protection and Government Accountability Act" ("Initiative 1935") has been determined to be eligible for the State's November 2024 statewide general election and, unless withdrawn by its proponent prior to June 27, 2024, will be certified as qualified for the ballot in such election. Were it to be approved by a majority of voters in the election, Initiative 1935 would amend Article XIII C of the State Constitution to, among other things, provide that charges (or increases in charges) imposed or extended by a local government after January 1, 2022 for services or products provided directly to the payor (including, potentially, fees and charges for electric utility services) are "taxes" subject to voter approval unless the local government can prove by clear and convincing evidence that the charge is reasonable and does not exceed the "actual cost" of providing the service or product. Initiative 1935 defines "actual cost" as "(i) the minimum amount necessary to reimburse the government for the cost of providing the service or the product to the payor and (ii) where the amount charged is not used by the government for any purpose other than reimbursing that cost." Initiative 1935 would also require that local governments impose fees and charges by ordinance (which may be subject to referendum). If adopted, Initiative 1935 would be subject to judicial interpretation. SMUD is unable to predict whether and how Initiative 1935, if approved, would be interpreted or applied, but it is possible any such interpretation or application could further limit future fees and charges or future increases in fees and charges for electric utility services, require stricter standards for the allocation of costs among customer classes and/or otherwise adversely impact SMUD and its revenues. In response to an emergency petition filed by Governor Gavin Newsom, with support from the League of California Cities and others, the California Supreme Court has unanimously agreed to decide whether the initiative should appear on the November 2024 ballot or be disqualified. A ruling is expected before June 30, 2024, which is the deadline for placing items on the November 2024 ballot.

On November 2, 2023, Assembly Constitutional Amendment No. 13 ("ACA 13") was filed with the Secretary of State and will be on the ballot for the November 2024 statewide general election. If approved by voters, ACA 13 would require any initiative constitutional amendment appearing on the ballot on or after January 1, 2024, that would increase the voter approval requirement to adopt any State or local measure to be approved by the highest voter approval requirement that the initiative measure would impose. In other words, if ACA 13 is approved by voters, its express terms appear to require Initiative 1935 to pass with a 2/3 vote, since Initiative 1935 would extend a 2/3 vote requirement to additional State and local fees and charges. If adopted, ACA 13 and its effect on the adoption of Initiative 1935, if applicable, are likely to be subject to judicial interpretation. SMUD is not able to predict whether or how ACA 13, if approved, would be interpreted or applied or whether or how ACA 13, if approved, would affect the adoption, interpretation or application of Initiative 1935, if adopted.

Wildfire Legislation. In response to catastrophic wildfires in California, legislation was adopted and signed into law requiring POU's (including SMUD), IOUs, and electrical cooperatives to construct, maintain and operate their electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by electrical lines and equipment. Senate Bill 247 ("SB 247"), signed by Governor Newsom on October 2, 2019, establishes notification, audit and reporting guidelines for electrical corporations relating to vegetation management requirements in the wildfire mitigation plan. SB 247 also specifies the qualifications for electrical line clearance tree trimmers performing work to comply with the vegetation management requirements in an electrical corporation's wildfire mitigation plan and requires that qualified line clearance tree trimmers be paid no less than a specified prevailing wage rate. POU's are not required to adhere to SB 247, but the market impacts are projected to significantly increase SMUD's annual vegetation management costs.

Nonstock Security. SMUD sponsored legislation in 2019, Assembly Bill 689, which was signed into law by Governor Newsom on September 5, 2019. This bill expressly allows SMUD the ability to operate a pilot project (effective January 1, 2020, to January 1, 2025), of up to three acquisitions, to hold nonstock security in a corporation or other private entity if acquired as part of a procurement of goods or services from that entity, provided that no separate funding is expended solely for the nonstock security. This will allow SMUD to realize the financial benefits of its investments, partnerships, and intellectual property.

On September 15, 2022, the Board authorized the CEO & GM to enter into a joint collaboration agreement with ESS Tech, Inc. ("ESS"). Under that agreement SMUD would procure from ESS iron flow batteries for utility scale long-duration energy storage applications. The agreement contemplates a multi-year phased deployment of up to 200MW/2GWh of long duration energy storage by 2028. As part of that procurement, SMUD acquired nonstock security in ESS.

SMUD will be sponsoring legislation in 2024 to extend the authority granted by Assembly Bill 689 to future years.

Future Regulation

The electric industry is subject to continuing legislative and administrative reform. States and Federal entities routinely consider changes to the way in which they regulate the electric industry. Recently, both further deregulation and forms of additional regulation have been proposed for the industry, which has been highly regulated throughout its history. SMUD is unable to predict at this time the impact any such proposals will have on the operations and finances of SMUD or the electric utility industry generally.

OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY

CAISO Market Initiatives

The CAISO routinely conducts a number of initiatives and stakeholder processes that propose certain operational and market changes that impact SMUD. SMUD does and will continue to monitor the various initiatives proposed by the CAISO and participate in its stakeholder processes to ensure that its interests are protected.

SMUD participates in the CAISO market for only a small percentage of energy needs, however, it continues to benefit from its participation in the CAISO's WEIM and is currently exploring further participation in the CAISO's proposed Extended Day Ahead Market ("EDAM") (both the WEIM and EDAM are described further below). Along with monitoring other key market initiatives at the CAISO which impact wholesale energy markets, SMUD will continue to actively participate in all processes related

to EIM and EDAM, to ensure both participation models are beneficial to SMUD’s customers. Given its success in EIM and active engagement with the CAISO and CAISO leadership, SMUD has earned a key role in the stakeholder processes related to these important and evolving markets.

Resource Adequacy Filing

In September 2005, the State Legislature enacted and the Governor signed into law Assembly Bill 380 (“AB 380”), which requires the CPUC to establish resource adequacy requirements for all LSEs within the CPUC’s jurisdiction. SMUD is not an LSE subject to the CPUC’s jurisdiction. In 2005, the CPUC issued a decision requiring jurisdictional LSEs to demonstrate that they have acquired capacity sufficient to serve their forecast retail customer load plus a minimum 15% planning reserve margin. In June 2022, the CPUC issued a decision increasing the minimum planning reserve margin to 16% for 2023 and 17% for 2024. In June 2023, the CPUC kept the minimum planning reserve margin at 17% for 2024 and extended the 17% requirement for 2025.

AB 380 also required publicly owned utilities, including SMUD, to meet the most recent resource adequacy standard as adopted by the WECC. The WECC has yet to formally adopt a resource adequacy requirement. However, consistent with current WECC practices, SMUD utilizes a minimum 15% planning reserve margin when assessing the need for future resources. For summer 2023, SMUD attained a 17% planning reserve margin and will have at least a 17% planning reserve margin for summer 2024 as well.

In 2022, the State Legislature adopted Assembly Bill 209 (2022) (“AB 209”), which requires the CEC to develop recommendations about approaches to determining an appropriate planning reserve margin for local publicly owned utilities within the CAISO balancing authority area. The CEC has initiated a proceeding and plans to publish a report with a recommended methodology in summer 2024. The report will not directly impact SMUD since SMUD is not in the CAISO; nevertheless, SMUD is monitoring the proceeding. The State Legislature also passed Assembly Bill 1373 (2023) (“AB 1373”) that requires the CEC to submit a report to the Legislature that assesses whether each local publicly owned electric utility in California (both inside and outside the CAISO) exceeded, met, or failed to meet its minimum planning reserve margin for 2023. The report must also assess whether local publicly owned utilities met the planning reserve margin for June through September 2023 established by the CPUC’s June 2022 decision (i.e., 16%). See also “DEVELOPMENTS IN THE ENERGY SECTOR – State Legislation and Regulatory Proceedings – *Reliability*.”

While SMUD believes the CEC’s report will show SMUD met both its 15% planning reserve margin and the CPUC’s 16% planning reserve margin for 2023, SMUD is unable to predict the outcome of the report, or what the Legislature intends to do with the report. To the extent the CEC or Legislature imposes a higher POU planning reserve margin for future years that includes SMUD, the ultimate impacts on SMUD’s financial results and operations are difficult to predict and are dependent on a variety of factors, such as the relative cost of procuring energy/capacity, the availability and relative cost of new technologies, and the adoption and implementation of energy efficiency and other measures by SMUD’s customers; however, such impacts could be material.

Western Energy Imbalance Market and Extended Day Ahead Market

Federal and state policymakers have long-promoted the development of organized markets in the west as a means (among other reasons) to better integrate intermittent renewable resources into the electric system, the first of which markets is the Western EIM, operated by the CAISO. The CAISO successfully launched the WEIM, a real time only imbalance market, on October 1, 2014, with PacifiCorp as the first participant. Since this time, the WEIM has grown significantly with the addition of 21 other Balancing

Authority Areas (including BANC) which together comprise roughly 80% of the load in the Western Interconnection.

To date, participation in the WEIM by SMUD has shown significant financial and operational benefits, in addition to furthering an already favorable working partnership between SMUD and the CAISO to develop solutions to integrate renewable resources in support of carbon reduction goals.

BANC's participation not only signaled the first public power participant in the EIM, but it was also implemented utilizing a unique phased approach, with SMUD (as the largest member of BANC) implementing so-called WEIM Phase 1 in 2019, while the other BANC members and WAPA (the "Phase 2 Parties") joined after further evaluation and approvals in March of 2021.

Part of the BANC Phase 2 participation included reimbursement to SMUD certain upfront infrastructure costs incurred by SMUD in Phase 1 to establish BANC as an WEIM Entity. This reimbursement to SMUD by the Phase 2 Parties has been completed.

The CAISO and WEIM participants, including SMUD and BANC, have participated in developing a design framework to extend the successful WEIM real time framework to the EDAM. Like WEIM, EDAM would broaden the access to regional resources for the reliable integration of renewable resources, only over a longer (day ahead) time horizon by allowing for a more economic and efficient optimization of regional resources by providing grid operators greater time (day ahead as opposed to real time) to commit or decommit units based on market price signals. Only participants in the WEIM will be allowed to extend their participation to EDAM. The CAISO launched a public stakeholder initiative and utilized most of 2022 developing the EDAM design. On February 1, 2023 the CAISO Board of Governors and EIM Governing Body approved the EDAM proposal, with the CAISO filing tariff amendments with FERC on August 22, 2023. FERC unanimously approved most of the filing on December 20, 2023, rejecting without prejudice just one element of the EDAM proposal related to transmission revenue recovery for market participants. The CAISO will work with first movers, PacifiCorp and BANC, and stakeholders in 2024 to refine transmission revenue recovery based on FERC's guidance and begin implementation activities, with the market expected to go-live in the first quarter of 2026. Similar to the process around WEIM participation, SMUD, along with BANC, performed cost-benefit studies that demonstrated EDAM participation will expand on the existing WEIM benefits and in August 2023, SMUD and BANC both approved participation in EDAM with an expectation to on-board in time for the first phase of EDAM participation in 2026.

Other Factors

The electric utility industry in general has been, or in the future may be, affected by a number of other factors which could impact the financial condition and competitiveness of many electric utilities and the level of utilization of generating and transmission facilities. In addition to the factors discussed above, such factors include, among others, (a) effects of compliance with rapidly changing environmental, safety, licensing, regulatory and legislative requirements other than those described above; (b) changes resulting from conservation and demand side management programs on the timing and use of electric energy; (c) changes resulting from a national energy policy; (d) effects of competition from other electric utilities (including increased competition resulting from mergers, acquisitions, and "strategic alliances" of competing electric and natural gas utilities and from competitors transmitting less expensive electricity from much greater distances over an interconnected system) and new methods of, and new facilities for, producing low cost electricity; (e) the repeal of certain federal statutes that would have the effect of increasing the competitiveness of many IOUs; (f) increased competition from independent power producers and marketers, brokers and federal power marketing agencies; (g) "self-generation" or "distributed generation" (such as solar, microturbines and fuel cells) by industrial and commercial customers and others; (h) issues relating to the ability to issue tax exempt obligations, including severe restrictions on the ability

to sell to nongovernmental entities electricity from generation projects and transmission service from transmission line projects financed with tax exempt obligations; (i) effects of inflation on the operating and maintenance costs of an electric utility and its facilities; (j) changes from projected future load requirements; (k) increases in costs and uncertain availability of capital; (l) issues relating to supply chains and the uncertain availability or increased costs of necessary materials; (m) shifts in the availability and relative costs of different fuels (including the cost of natural gas); (n) sudden and dramatic increases in the price of energy purchased on the open market that may occur in times of high peak demand in an area of the country experiencing such high peak demand, such as has occurred in the State; (o) issues relating to risk management procedures and practices with respect to, among other things, the purchase and sale of natural gas, energy and transmission capacity; (p) other legislative changes, voter initiatives, referenda and statewide propositions; (q) effects of changes in the economy; (r) effects of possible manipulation of the electric markets; (s) natural disasters or other physical calamities, including, but not limited to, earthquakes, droughts, severe weather, wildfires and floods; (t) changes to the climate, including increasing volatility in rainfall in the Western United States and a reduction in the depth and duration of the Sierra snowpack; (u) issues relating to cyber-security; and (v) outbreaks of infectious diseases or the occurrence of pandemics. Any of these factors (as well as other factors) could have an adverse effect on the financial condition of any given electric utility, including SMUD's electric utility, and likely will affect individual utilities in different ways.

SMUD is unable to predict what impact such factors will have on the business operations and financial condition of SMUD's electric system, but the impact could be significant. SMUD has taken major steps to mitigate the impacts of many of the changes. This Official Statement includes a brief discussion of certain of these factors. This discussion does not purport to be comprehensive or definitive, and these matters are subject to change subsequent to the date hereof. Extensive information on the electric utility industry is available from the legislative and regulatory bodies and other sources in the public domain, and potential purchasers of any of SMUD's Senior Bonds or Subordinated Bonds described in the forepart of this Official Statement should obtain and review such information.

APPENDIX B

**2023 AND 2022 CONSOLIDATED FINANCIAL STATEMENTS
AND REPORT OF INDEPENDENT ACCOUNTANTS**

APPENDIX C

BOOK-ENTRY SYSTEM

The information in this Appendix regarding DTC has been provided by DTC, and SMUD takes no responsibility for the accuracy or completeness thereof. SMUD cannot and does not give any assurances that DTC, DTC Participants or Indirect Participants will distribute the Beneficial Owners either (a) payments of interest or principal with respect to the 2024 Series N Bonds or (b) certificates representing ownership interest in or other confirmation of ownership interest in the 2024 Series N Bonds, or that they will so do on a timely basis or that DTC, DTC Participants or DTC Indirect Participants will act in the manner described in this Official Statement.

The Depository Trust Company (“DTC”) New York, NY, will act as securities depository for the 2024 Series N Bonds. The 2024 Series N Bonds will be issued as fully registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully registered Bond certificate will be issued for each maturity of the 2024 Series N Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, as amended. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues and money market instruments from over 100 countries that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others, such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a Standard & Poor’s rating of AA+. The DTC rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of the 2024 Series N Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2024 Series N Bonds on DTC’s records. The ownership interest of each actual purchaser of each 2024 Series N Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2024 Series N Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their beneficial ownership interests in the 2024 Series N Bonds, except in the event that use of the book-entry system for the 2024 Series N Bonds is discontinued.

To facilitate subsequent transfers, all 2024 Series N Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. or such other name as may be requested by an authorized representative of DTC. The deposit of the 2024 Series N Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2024 Series N Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 2024 Series N Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the 2024 Series N Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2024 Series N Bonds, such as redemptions, tenders, defaults, and proposed amendments to the bond documents. For example, Beneficial Owners of the 2024 Series N Bonds may wish to ascertain that the nominee holding the 2024 Series N Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners.

Redemption notices shall be sent to DTC. If less than all of a maturity of the 2024 Series N Bonds is being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in the 2024 Series N Bonds of such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the 2024 Series N Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to SMUD as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the 2024 Series N Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal, premium, redemption proceeds and interest payments on the 2024 Series N Bonds will be made to Cede & Co. or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts, upon DTC's receipt of funds and corresponding detail information from SMUD or the Trustee, on a payment date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participants and not of DTC, its nominee, the Trustee or SMUD, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, premium, redemption proceeds and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Trustee. Disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of the Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the 2024 Series N Bonds at any time by giving reasonable notice to SMUD or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, bond certificates are required to be printed and delivered.

SMUD may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, bond certificates for such 2024 Series N Bonds will be printed and delivered to DTC.

Neither SMUD or the Trustee will have any responsibility or obligation to Participants, to Indirect Participants or to any Beneficial Owner with respect to (i) the accuracy of any records maintained by DTC, any Participant, or any Indirect Participant; (ii) the payment by DTC or any Participant or Indirect Participant of any amount with respect to the principal of or premium, if any, or interest on the 2024 Series N Bonds; (iii) any notice which is permitted or required to be given to Holders under the Resolution; (iv) the selection by DTC, any Participant or any Indirect Participant of any person to receive payment in the event of a partial redemption of 2024 Series N Bonds; (v) any consent given or other action taken by DTC as Bondholder; or (vi) any other procedures or obligations of DTC, Participants or Indirect Participants under the book-entry system.

APPENDIX D

SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION

The following is a summary of certain provisions of the Resolution. Other provisions of the Resolution are described under the captions “THE 2024 SERIES N BONDS” and “SECURITY FOR THE BONDS.” This summary is not to be considered a full statement of the terms of the Resolution and accordingly is qualified by reference thereto and is subject to the full text thereof. Capitalized terms not otherwise defined in this Official Statement shall have the meanings ascribed thereto in the Resolution.

Between July 1997 and August 2003, SMUD received consents to amend the Resolution from the owners of the requisite percentage of Outstanding Bonds. Pursuant to the authority granted by such consents, SMUD amended the Resolution in October 2003 by adopting the Forty-Eighth Supplemental Resolution and the Forty-Ninth Supplemental Resolution. The following summary of the Resolution reflects such amendments.

The purchasers of the 2024 Series N Bonds, by virtue of their purchase of the 2024 Series N Bonds, will consent to certain amendments to the Resolution (the “Proposed Amendments”). Such amendments are described in *bold italic* font in the forepart of this Official Statement under “SECURITY FOR THE BONDS – Rates and Charges” and “—Limitations on Additional Obligations Payable from Revenues” and in this summary of the Resolution under the captions “Certain Definitions” and “Reserve Fund for Certain Bonds.” The written consents to the Proposed Amendments of the holders and registered owners of at least 60% of the Bonds outstanding have been filed with SMUD or the Trustee, as required by the Resolution. However, while certain Bonds remain outstanding SMUD must also obtain the written consents of certain bond insurers to implement the Proposed Amendments. SMUD expects to implement the Proposed Amendments when the written consents of such bond insurers are obtained or when the Bonds insured by such bond insurers are no longer outstanding. The final maturity date of the insured Bonds is July 1, 2024.

Certain Definitions

“Assumed Interest Payments” means for any fiscal year or period interest which would accrue during such fiscal year or period on an amount equal to the then unamortized balance of the remaining sum of Assumed Principal Payments at the Assumed Interest Rate.

“Assumed Interest Rate” for any Parity Bond means an interest rate equal to the “Bond Buyer Revenue Bond Index” most recently published in The Bond Buyer prior to the date of issuance of the Parity Bond to which the Assumed Interest Rate is applicable.

“Assumed Principal Payments” means for any fiscal year or period the sum of all amortized portions of each Excluded Principal Payment which fall within such fiscal year or period after the Excluded Principal Payments have been amortized (for purposes of this definition) equally over the years (pro rata in the case of a partial year) in the period commencing on the date of issuance of the Parity Bonds to which such Excluded Principal Payment relates and ending on the date which is 30 years from such date of issuance. Notwithstanding the foregoing, if Parity Bonds determined by SMUD to be an Excluded Principal Payment are refinanced with Parity Bonds determined by SMUD to be another Excluded Principal Payment, (1) Assumed Principal Payments with respect to the refinancing Parity Bonds shall not include any amount of principal which has previously been assumed amortized with respect to the refinanced Parity Bonds and (2) the period over which the refinancing Parity Bonds shall be assumed to be amortized shall be the period commencing on the date of issuance of the refinancing Parity Bonds and ending on the date which is 30 years from the date of issuance of the refinanced Parity Bonds.

“Electric System” means the entire electric system of SMUD, together with all additions, betterments, extensions and improvements.

“Energy Payments” means, when used with respect to the Electric System, all actual costs incurred, or charges made therefor, by SMUD in any particular fiscal year or period to which said term is applicable for purchased power (including power purchased from any special district included within the boundaries of SMUD), electric and thermal energy and capacity under contracts providing for payments by SMUD for electric or thermal energy or capacity whether or not such energy or capacity is delivered or capable of being delivered or otherwise made available to or received by or for the account of SMUD.

“Excluded Principal Payments” means each payment of principal on Parity Bonds which the Board of Directors of SMUD determines (on a date not later than the date of issuance of such Parity Bonds) that SMUD intends to refinance at or prior to the maturity date(s) of such Parity Bonds or otherwise to pay with moneys which are not Revenues. No such determination shall affect the security for such Parity Bonds or the obligation of SMUD to pay such payments from Revenues.

“Financial Products Agreement” means an interest rate swap, cap, collar, option, floor, forward or other hedging agreement, arrangement or security, however denominated, entered into by SMUD with a Qualified Provider not for investment purposes but with respect to specific Parity Bonds for the purpose of (1) reducing or otherwise managing SMUD’s risk of interest rate changes or (2) effectively converting SMUD’s interest rate exposure, in whole or in part, from a fixed rate exposure to a variable rate exposure, or from a variable rate exposure to a fixed rate exposure.

“Financial Product Payments” means payments periodically required to be paid to a counterparty by SMUD pursuant to a Financial Products Agreement.

“Financial Product Receipts” means amounts periodically required to be paid to SMUD by a counterparty pursuant to a Financial Products Agreement.

“Maintenance and Operation Costs” means all actual maintenance and operation costs incurred by SMUD (including purchased power and fuel costs) or charges therefor made in conformity with generally accepted accounting principles, exclusive in all cases of depreciation, or obsolescence charges or reserves therefor, amortization of intangibles or other entries of a similar nature, interest charges and charges for the payment of principal of SMUD debt.

“Net Revenues” for any fiscal period means the sum of (a) the Revenues for such fiscal period plus (b) the amounts, if any, withdrawn by SMUD from the Rate Stabilization Fund for treatment as Revenues for such fiscal period, less the sum of (c) all Maintenance and Operation Costs for such fiscal period, (d) all Energy Payments for such fiscal period not included in Maintenance and Operation Costs for such fiscal period, and (e) the amounts, if any, withdrawn by SMUD from Revenues for such fiscal period for deposit in the Rate Stabilization Fund pursuant to the Resolution.

“Parity Bonds” includes the Bonds and all revenue bonds issued on a parity with the Bonds as provided or permitted in the Resolution. No Parity Bonds (other than the Bonds) are currently outstanding.

“Qualified Provider” means any financial institution or insurance company which is a party to a Financial Products Agreement if the unsecured long-term debt obligations of such financial institution or insurance company (or of the parent or a subsidiary of such financial institution or insurance company if such parent or subsidiary unconditionally guarantees the performance of such financial institution or insurance company under such Financial Products Agreement and the Trustee receives an opinion of

counsel to the effect that such guarantee is a valid and binding agreement of such parent or subsidiary), or obligations secured or supported by a letter of credit, contract, guarantee, agreement, insurance policy or surety bond issued by such financial institution or insurance company (or such guarantor parent or subsidiary), are rated in one of the two highest rating categories of a national rating agency (without regard to any gradation or such rating category) at the time of the execution and delivery of the Financial Products Agreement.

“Rate Stabilization Fund” means the fund by that name established in the Resolution. From time to time, after provision for debt service, SMUD may deposit in the Rate Stabilization Fund from remaining Revenues such amounts as SMUD shall determine, provided that deposits may be made until (but not after) the date 120 days after the end of such fiscal year. SMUD may withdraw amounts from the Rate Stabilization Fund only for inclusion in Revenues for any fiscal year, such withdrawals to be made until (but not after) 120 days after the end of such fiscal year. All interest or other earnings on deposits in the Rate Stabilization Fund shall be withdrawn therefrom and accounted for as Revenues. Notwithstanding the foregoing, no deposit of Revenues to the Rate Stabilization Fund may be made to the extent such Revenues were included in an engineer’s certificate submitted in connection with the issuance of additional revenue bonds payable from Revenues and withdrawal of the Revenues to be deposited in the Rate Stabilization Fund from the Revenues employed in rendering said engineer’s certificate would have caused noncompliance with the provisions of the Resolution restricting issuance of additional obligations or securities payable from Revenues or to the extent any withdrawal of amounts from remaining Revenues for the Rate Stabilization Fund for any fiscal year would have reduced the debt service ratio referred to in this Appendix under the caption “Reserve Fund for Certain Bonds” to or below 1.40.

“Revenues” means all charges received for, and all other income and receipts derived by SMUD from the operation of the Electric System, or arising from the Electric System (consisting primarily of income derived from the sale or use of electric energy generated, transmitted or distributed by facilities of the Electric System, but also including receipts from the sale of property pertaining to the Electric System or incidental to the operation of the Electric System or from services performed by SMUD in connection with the Electric System and revenues derived from certain wholesale, but not retail, sales of water), but exclusive in every case of any moneys derived from the levy or collection of taxes upon any taxable property in SMUD.

“Subsidy” means any subsidy, reimbursement or other payment from the federal government of the United States of America under the American Recovery and Reinvestment Act of 2009 (or any similar legislation or regulation of the federal government of the United States of America or any other governmental entity or any extension of any of such legislation or regulation).

Reserve Fund for Certain Bonds

The Electric Revenue Bond Reserve Fund (the “Reserve Fund”) is created under the Resolution. The Reserve Fund secures all Bonds issued prior to January 1, 2004 that are currently outstanding (and not otherwise deemed to be paid and discharged under the Resolution) and may secure additional Bonds issued in the future. However, the Reserve Fund does not secure and will not be available to pay debt service on the 2024 Series N Bonds.

After the close of each fiscal year, SMUD shall determine the ratio (herein called the “debt service ratio”) of (1) the Net Revenues during said fiscal year to (2) the maximum annual debt service during the period of three fiscal years next following said fiscal year on all Bonds and Parity Bonds then outstanding. For this purpose, the term “maximum annual debt service” shall mean the sum of (i) the interest falling due on serial bonds and term bonds, (ii) the principal amount of serial bonds falling due by

their terms, and (iii) the amount of minimum sinking fund payments required, as computed for the year in which such sum shall be a maximum. Interest during construction which has been funded and provided for shall not be included in “minimum annual debt service” for the purpose of the above calculation.

So long as the debt service ratio shall exceed 1.40, the amount required to be maintained in the Reserve Fund shall be an amount such that the amount in the combined reserve funds of all Parity Bonds then outstanding will at no time be less than the current annual interest requirements on all then outstanding Parity Bonds, except only bonds (if any) for which payment has been provided in advance. If the debt service ratio in any fiscal year shall fall below 1.40, the Treasurer shall set aside in the Reserve Fund or in any other reserve fund or funds established for any one or more issues of the Parity Bonds (on or before the first day of each month of the next succeeding fiscal year) from the first available Net Revenues an amount not less than 15% of the sum of the current monthly interest requirements of all Parity Bonds then outstanding until the next year in which the debt service ratio shall exceed 1.40 or until the aggregate amount in the combined reserve funds established for all of the Parity Bonds (including the Reserve Fund) is equal to the maximum annual debt service on all of the Parity Bonds then outstanding, whichever shall first occur.

For purposes of the above calculation, the interest rates of Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Bonds bear a rate or rates of interest for a known period or periods of time, such interest rate or rates for such period or periods, and thereafter, for the portion of the calculation period not covered by such known period or periods, the interest rate shall be the greater of the numerical maximum rate that such Bonds may vary or be adjusted to and the numerical maximum rate (if any) that the interest rate for such Bonds may be fixed to, in both cases as set forth in the supplemental resolution authorizing such Bonds, or if such rate or rates have been increased in accordance with such supplemental resolution at such increased rate or rates.

Any amount in the Reserve Fund at any time in excess of the balance required to be then maintained therein shall be released to SMUD for any SMUD use.

SMUD shall not be required, notwithstanding anything herein contained, to maintain in the combined reserve funds appertaining to all Parity Bonds of SMUD, an aggregate amount in excess of the maximum annual debt service requirements in any subsequent fiscal year on all of the then outstanding Parity Bonds.

Any moneys at any time in any of said reserve funds shall be held by the Treasurer in trust for the benefit of the holder or holders from time to time of the Bonds and the coupons appertaining thereto entitled to be paid therewith, and SMUD shall not have any beneficial right or interest in any such moneys.

Notwithstanding the foregoing, a Supplemental Resolution adopted after the Forty-Eighth Supplemental Resolution may provide that a Series of Bonds issued pursuant to such Supplemental Resolution shall not be secured by the Reserve Fund. In such event, (i) payments of the principal of and interest on such Bonds shall be excluded from all calculations made in respect of the amount to be maintained in the Reserve Fund and (ii) amounts on deposit in the Reserve Fund shall not be applied to the payment of the principal of or interest on such Bonds, even if no other moneys are available therefor.

The 2024 Series N Bonds are not secured by the Reserve Fund.

In lieu of maintaining and depositing moneys in the Reserve Fund, SMUD may maintain and deposit in the Reserve Fund, for the sole benefit of the holders of Parity Bonds, a letter of credit (1) which is issued by a bank with a credit rating at the time of deposit of such letter of credit into the Reserve Fund within one of the top two rating categories (without regard to any refinement or graduation of such rating category by numerical modifier or otherwise) of Moody's Investors Service ("Moody's") and Standard & Poor's Rating Group, a division of The McGraw-Hill Companies, Inc. ("S&P"), (2) the repayment obligation with respect to which is not secured by a lien on assets of SMUD senior to any lien which secures the Bondholders and (3) which has a term of at least 364 days from the date of issuance thereof. If the credit rating of the bank issuing such letter of credit falls below such top two rating categories, SMUD shall within twelve months of such downgrading either (a) substitute a new letter of credit satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or an irrevocable surety bond policy satisfying the requirements of the immediately succeeding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). At least 120 days prior to the expiration date of a letter of credit on deposit in the Reserve Fund, SMUD shall either (a) substitute a new letter of credit satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or an irrevocable surety bond policy satisfying the requirements of the immediately succeeding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). Any such letter of credit shall permit SMUD to draw amounts thereunder for deposit in the Reserve Fund which, together with any moneys on deposit in, or surety bond policy available to fund, the Reserve Fund, are not less than the balance required to then be maintained in the Reserve Fund (the "Reserve Fund Requirement") and which may be applied to any purpose for which moneys in the Reserve Fund may be applied. SMUD shall make a drawing on such letter of credit and deposit the moneys obtained from drawing in the Reserve Fund (a) whenever moneys are required for the purposes for which Reserve Fund moneys may be applied, and (b) prior to any expiration or termination thereof; provided, however, that no such drawing need be made if other moneys or an irrevocable surety bond are available in the Reserve Fund in the amount of the Reserve Fund Requirement.

In lieu of maintaining and depositing moneys in the Reserve Fund, SMUD also may maintain and deposit in the Reserve Fund, for the sole benefit of the holders of the Bonds, an irrevocable surety bond policy (1) which is issued by a bond insurance company with a claims-paying ability rating at the time of deposit of such surety bond policy into the Reserve Fund within one of the top two rating categories (without regard to any refinement or graduation of such rating category by numerical modifier or otherwise) from Moody's and S&P, (2) the repayment obligation with respect to which is not secured by a lien on assets of SMUD senior to any lien which secures the Bondholders and (3) has a term of at least 364 days from the date of issuance thereof. If the credit rating of the bond insurance company issuing such surety bond policy falls below such top two rating categories, SMUD shall, within twelve months of such downgrading, either (a) substitute a new surety bond policy satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or a letter of credit satisfying the requirements of the immediately preceding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). At least 120 days prior to the expiration date of a surety bond policy on deposit in the Reserve Fund, SMUD shall either (a) substitute a new surety bond policy satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or a letter of credit satisfying the requirements of the immediately preceding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). Any such surety bond policy shall permit SMUD to obtain amounts thereunder for deposit in the Reserve Fund which, together with any moneys on deposit in, or letter of credit available to fund, the Reserve Fund, are not less than the Reserve Fund Requirement and which may be applied to any purpose for which moneys in the Reserve Fund may be applied. SMUD shall make a drawing on such surety bond policy and deposit the proceeds derived from such drawing in the Reserve Fund (a) whenever moneys are required for the purposes for which Reserve Fund moneys may be applied, and (b) prior to

any expiration or termination thereof; provided, however, that no such drawing need be made if other moneys or a letter of credit are available in the Reserve Fund in the amount of the Reserve Fund Requirement.

Notwithstanding anything to the contrary in the prior two paragraphs, if at any time that there is on deposit in the Reserve Fund a combination of cash, a letter of credit and/or a surety bond as contemplated above, SMUD shall draw first on such cash to the extent required and available, then on (1) such surety bond and letter of credit on a pro rata basis (if both a surety bond and letter of credit are available) to the extent required and available, or (2) such surety bond or letter of credit (if either a surety bond or letter of credit, but not both, is available) to the extent required and available.

For purposes of calculating the “debt service ratio” and, unless otherwise specified in a Supplemental Resolution providing for the issuance of a series of Parity Bonds, the amount required to be maintained in the Reserve Fund as described above: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that SMUD receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by SMUD with respect to or in connection with such Parity Bonds during such period of time.

Additional Covenants

The Resolution contains the following additional covenants, among others:

1. That the Electric System will be maintained in good repair, working order and condition at all times, and will be continuously operated in an efficient and economical manner.
2. That no electric energy shall be supplied free by SMUD, and a reasonable wholesale charge will be made for water distributed at any cost to SMUD and such charge will be deemed Revenues; but SMUD may supply without charge water furnished to it without distribution cost, and any moneys received from any retail sales of water will not be deemed Revenues.
3. That all taxes and governmental charges and other lawful claims which might become a lien on the Electric System or the Revenues or impair the security of the Bonds will be paid and discharged when due.
4. That SMUD will comply with all lawful orders of any governmental agency or authority having jurisdiction in the premises (except while the validity or application thereof is being contested in good faith) and with all necessary permits and licenses issued by the NRC.
5. That no lease or agreement will be entered into, or sale or other disposition of essential property made, that would impair the operation of the Electric System or the rights of Bondholders with respect to the Revenues; provided, however, that notwithstanding the foregoing or any other provision of the Master Resolution, SMUD may sell or otherwise dispose of its accounts receivable and customer loan balances due to SMUD provided that SMUD delivers to the Trustee:
 - (a) a Certificate of SMUD to the effect that the amount derived by SMUD from the sale or other disposition of such accounts receivable or loan balances is a result of the sale or other disposition of such accounts receivable or loan balances upon fair and reasonable terms no

less favorable to SMUD than the terms of a comparable arm's-length transaction treated as a sale and not a loan under generally accepted accounting principles; and

(b) a written statement or report of an independent certified public accountant to the effect that, based on the audited financial statements of SMUD for the most recent fiscal year for which audited financial statements are available and after giving effect to such transaction by reducing Revenues for such fiscal year by the difference between the face amount of such accounts receivable or loan balances and the amount derived by SMUD from the sale or other disposition of such accounts receivable or loan balances, the debt service ratio computed pursuant to the Master Resolution would not have been reduced to less than 1.40:1.0.

6. That proper records and accounts will be maintained of all transactions relating to the Electric System and the Revenues (open to inspection by the Trustee and the holders of not less than 10 percent in principal amount of the Bonds), to be audited annually by an independent certified public accountant within 90 days after close of the fiscal year, and copies of such financial statements supplied to Bondholders on request.

7. That insurance adequate in amounts and as to risks covered will be maintained against such risks as are usually insurable in connection with similar electric systems, and in addition public liability and property damage insurance in amounts not less than \$1,000,000 per accident and adequate fidelity bonds on all officers and employees of SMUD handling or responsible for SMUD funds, subject in each case to the condition that such insurance is obtainable at reasonable rates and upon reasonable terms and conditions. See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – INSURANCE” attached to this Official Statement for a description of SMUD’s insurance.

8. That the net proceeds realized by SMUD in the event all or any part of the Electric System is taken by eminent domain proceedings will be applied to the redemption or retirement of all Bonds and Parity Bonds if sufficient therefor, and, if not, then pro rata to the redemption or retirement of Bonds and Parity Bonds or to new facilities if the additional Revenues to be derived therefrom will sufficiently offset the loss of Revenues resulting from such eminent domain so that the ability of SMUD to meet its obligations will not be substantially impaired.

9. That SMUD will at all times use its best efforts to maintain the powers, functions and duties now reposed in it pursuant to law.

10. That SMUD will establish and at all times maintain and collect rates and charges for the sale or use of its electric energy sufficient to permit SMUD to purchase power or issue and sell Bonds or Parity Bonds to finance additions, betterments, extensions and improvements to the Electric System as may be reasonably necessary to satisfy its then projected electric demand upon its Electric System, and that unless the Board determines that SMUD will be able to satisfy such demand through the purchase of electric energy, SMUD will proceed with all reasonable diligence to issue and sell such Bonds or Parity Bonds.

11. That SMUD will not create, or permit the creation of, any mortgage or lien upon the Electric System or any property essential to the proper operation of the Electric System or to the maintenance of the Revenues. SMUD will not create, or permit the creation of, any pledge, lien, charge or encumbrance upon the Revenues except only as provided in the Master Resolution; provided that, notwithstanding the foregoing or any other provision of the Master Resolution, SMUD may create a pledge, lien, charge or encumbrance upon its accounts receivable and customer loan balances due to SMUD (which pledge, lien, charge or encumbrance shall be prior to any pledge, lien, charge or

encumbrance created or made pursuant to the Master Resolution, including without limitation the pledge of Revenues made pursuant to the Master Resolution) to secure indebtedness with a term of one year or less provided that the principal amount of such indebtedness does not exceed 50% of the aggregate face amount of the accounts receivable and customer loan balances due to SMUD as shown on SMUD's most recent audited financial statements.

Amendment of the Resolution

The Resolution and the rights and obligations of SMUD and of the holders of the Bonds may be modified or amended at any time pursuant to the affirmative vote at a meeting of Bondholders, or with the written consent without a meeting, of the holders of 60 percent in aggregate principal amount of the Bonds then outstanding, provided that no such modification or amendment shall (i) extend the fixed maturity of any Bond, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon or reduce any premium payable upon the redemption thereof, without the consent of the holder of each Bond so affected, or (ii) reduce the aforesaid percentage of Bonds required for consent to an amendment or modification, without the consent of the holders of all the Bonds then outstanding. Modifications or amendments may be made, without the consent of any Bondholders, to add covenants of SMUD or to surrender rights reserved by SMUD in the Resolution, to cure ambiguities or defective or inconsistent provisions or in regard to questions arising under the Resolution without adversely affecting the interests of the Bondholders, or to provide for the issuance of a series of Bonds, subject to the provisions contained in the Resolution with respect thereto.

Events of Default and Remedies of Bondholders

The Resolution declares each of the following to be an event of default:

- (a) Failure to pay the principal of and premium on any Bond when due and payable;
- (b) Failure to pay any installment of interest on any Bond when due and payable, if such default continues for a period of 30 days;
- (c) Default by SMUD in the observance of any of the covenants, agreements or conditions on its part in the Resolution or in the Bonds, if such default continues for a period of 60 days after written notice thereof (specifying such default and requiring the same to be remedied) has been given to SMUD by the Trustee, or to SMUD and the Trustee by the holders of not less than 25 percent in aggregate principal amount of the Bonds at the time outstanding; and
- (d) If, under the provisions of any law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of SMUD or of the whole or any substantial part of its property, and such custody or control shall not be terminated or stayed within 60 days.

In the event of default, the Trustee or the holders of not less than a majority in aggregate principal amount of the outstanding Bonds may, upon written notice to SMUD, declare the principal of all outstanding Bonds, and the interest accrued thereon, to be due and payable immediately. The Trustee is appointed as trustee to represent Bondholders and may take such action as may seem appropriate to it, and, upon the written request of the holders of 25 percent in aggregate principal amount of the outstanding Bonds, and upon being furnished with indemnity satisfactory to it, will take such action on behalf of Bondholders as is specified in such written request. Each Bondholder is entitled to proceed to protect and enforce the rights vested in such holder by the Resolution by such appropriate judicial proceedings as such holder deems most effectual.

The rights of Bondholders are limited and restricted to the use and application of Revenues as provided in the Resolution and do not extend to the levy of any attachment or execution upon or forfeiture of any of the properties of SMUD or to any moneys derived by SMUD from the levy or collection of taxes.

In addition to the limitations on remedies contained in the Resolution, the rights and remedies provided by the Bonds and the Resolution, as well as the enforcement by SMUD of contracts with customers of the Electric System, may be limited by and are subject to bankruptcy, insolvency, reorganization and other laws affecting the enforcement of creditors' rights.

Refunding of 2024 Series N Bonds

If Refunding Bonds are issued for the purpose of refunding 2024 Series N Bonds, then SMUD is authorized to apply proceeds of the sale of such Refunding Bonds to the payment of the purchase price of direct noncallable obligations of the United States of America ("Treasury Obligations") to be held by the Trustee to insure the payment or retirement at or before maturity of all or a portion of the outstanding 2024 Series N Bonds. Upon deposit with the Trustee, in trust, of money or Treasury Obligations (including, but not limited to, direct obligations of the United States of America issued in book-entry form on the books of the Department of the Treasury of the United States of America), or any combination thereof, sufficient, together with the interest to accrue on any such Treasury Obligations, to pay or redeem all or a portion of 2024 Series N Bonds then outstanding at or before their maturity date, all liability of SMUD in respect of such 2024 Series N Bonds shall cease, determine and be completely discharged, and the holders thereof shall thereafter be entitled only to payment by SMUD out of the money and Treasury Obligations deposited with the Trustee for their payment. If the liability of SMUD shall cease and determine with respect to all or a portion of the 2024 Series N Bonds, then said 2024 Series N Bonds shall not be considered to be outstanding Bonds for any purpose of the Resolution.

Discharge of Resolution

The Resolution may be discharged by depositing with the Trustee in trust, moneys or Federal Securities or general obligation bonds of the State of California, in such amount as the Trustee shall determine will, together with the interest to accrue thereon, be fully sufficient to pay and discharge the indebtedness on all Bonds at or before their respective maturity dates.

Investment of Funds

Moneys in any fund established by the Resolution may be invested in bonds, notes, certificates of indebtedness, bills, bankers acceptances or other securities in which funds of SMUD may be legally invested as provided by the law in effect at the time of such investment. Currently this investment authority includes, among other things, the Local Agency Investment Fund which is administered by the Treasurer of the State of California for the investment of funds belonging to local agencies in the State of California.

APPENDIX E

PROPOSED FORM OF LEGAL OPINION FOR 2024 SERIES N BONDS

[Closing Date]

Sacramento Municipal Utility District
Sacramento, California

Sacramento Municipal Utility District
Electric Revenue Refunding Bonds, 2024 Series N
(Final Opinion)

Ladies and Gentlemen:

We have acted as bond counsel to the Sacramento Municipal Utility District (“SMUD”) in connection with the issuance of \$ _____ aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2024 Series N (the “2024 Series N Bonds”), issued pursuant to Resolution No. 6649 of the Board of Directors of SMUD, adopted January 7, 1971 (the “Master Resolution”), as supplemented and amended by later resolutions of said Board of Directors (as so supplemented and amended, the “Resolution”), including Resolution No. 24-03-[], adopted March 21, 2024 (the “Sixty-Seventh Supplemental Resolution”). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Resolution.

In such connection, we have reviewed the Resolution; the Tax Certificate, dated the date hereof (the “Tax Certificate”), executed by SMUD; opinions of counsel to SMUD and the Trustee; certificates of SMUD, the Trustee and others; and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after original delivery of the 2024 Series N Bonds on the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after original delivery of the 2024 Series N Bonds on the date hereof. Accordingly, this letter speaks only as of its date and is not intended to, and may not, be relied upon or otherwise used in connection with any such actions, events or matters. Our engagement with respect to the 2024 Series N Bonds has concluded with their issuance, and we disclaim any obligation to update this letter. We have assumed the genuineness of all documents and signatures provided to us and the due and legal execution and delivery thereof by, and validity against, any parties other than SMUD. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all covenants and agreements contained in the Resolution and the Tax Certificate, including (without limitation) covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the 2024 Series N Bonds to be included in gross income for federal income tax purposes.

We call attention to the fact that the rights and obligations under the 2024 Series N Bonds, the Resolution and the Tax Certificate and their enforceability may be subject to bankruptcy, insolvency, receivership, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to

or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against governmental entities such as SMUD in the State of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinion with respect to the state or quality of title to or interest in any of the property described in or as subject to the lien of the Resolution or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such property. Our services did not include financial or other non-legal advice. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement, dated _____, 2024, or other offering material relating to the 2024 Series N Bonds and express no opinion or view with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The 2024 Series N Bonds constitute the valid and binding limited obligations of SMUD.
2. The Resolution, including the Sixty-Seventh Supplemental Resolution, has been duly adopted by, and constitutes the valid and binding obligation of, SMUD. The Resolution creates a valid pledge, to secure the payment of the principal of and interest on the 2024 Series N Bonds, of the Net Revenues, subject to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution.
3. Interest on the 2024 Series N Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. Interest on the 2024 Series N Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. We observe that interest on the 2024 Series N Bonds included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. We express no opinion regarding other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2024 Series N Bonds.

Faithfully yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

per

APPENDIX F

FORM OF CONTINUING DISCLOSURE AGREEMENT

This Continuing Disclosure Agreement (the “Disclosure Agreement”) is executed and delivered by the Sacramento Municipal Utility District (the “Issuer”) and U.S. Bank Trust Company, National Association, in its capacity as Dissemination Agent (the “Dissemination Agent”) in connection with the issuance of \$_____ aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2024 Series N (the “2024 Series N Bonds”). The 2024 Series N Bonds are being issued pursuant to the Issuer’s Resolution No. 6649, adopted on January 7, 1971, as amended and supplemented by supplemental resolutions, including Resolution No. 24-03-[], adopted on March 21, 2024 (the “Resolution”). Pursuant to Section 146.11 of the Resolution, the Issuer and the Dissemination Agent covenant and agree as follows:

SECTION 1. Purpose of the Disclosure Agreement. This Disclosure Agreement is being executed and delivered by the Issuer and the Dissemination Agent for the benefit of the Holders and Beneficial Owners of the 2024 Series N Bonds and in order to assist the Participating Underwriters in complying with S.E.C. Rule 15c2-12(b)(5).

SECTION 2. Definitions. In addition to the definitions set forth in the Resolution, which apply to any capitalized term used in this Disclosure Agreement unless otherwise defined in this Section 2, the following capitalized terms shall have the following meanings:

“Annual Report” shall mean any Annual Report provided by the Issuer pursuant to, and as described in, Sections 3 and 4 of this Disclosure Agreement.

“Beneficial Owner” shall mean any person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any 2024 Series N Bonds (including persons holding Bonds through nominees, depositories or other intermediaries).

“Disclosure Representative” shall mean the Treasurer of the Issuer or his or her designee, or such other officer or employee as the Issuer shall designate in writing to the Trustee from time to time.

“Dissemination Agent” shall mean U.S. Bank Trust Company, National Association, acting in its capacity as Dissemination Agent hereunder, or any successor Dissemination Agent designated in writing by the Issuer and which has filed with the Trustee a written acceptance of such designation.

“EMMA” shall mean the MSRB’s Electronic Municipal Market Access system.

“Financial Obligation” shall mean, for purposes of the Listed Events set out in Section 5(a)(15) and Section 5(a)(16), a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term “Financial Obligation” shall not include municipal securities (as defined in the Securities Exchange Act of 1934, as amended) as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule.

“Listed Events” shall mean any of the events listed in Section 5(a) of this Disclosure Agreement.

“MSRB” shall mean the Municipal Securities Rulemaking Board.

“Participating Underwriters” shall mean any of the original underwriters of the 2024 Series N Bonds required to comply with the Rule in connection with offering of the 2024 Series N Bonds.

“Repository” shall mean the MSRB through EMMA or any other entity or system designated or authorized by the Securities and Exchange Commission to receive reports pursuant to the Rule.

“Rule” shall mean Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

“State” shall mean the State of California.

SECTION 3. Provision of Annual Reports.

(a) The Issuer shall, or shall cause the Dissemination Agent to, not later than one hundred eighty (180) days after the end of the Issuer’s fiscal year (presently December 31), commencing with the report for the 2024 Fiscal Year, provide to each Repository an Annual Report which is consistent with the requirements of Section 4 of this Disclosure Agreement. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may include by reference other information as provided in Section 4 of this Disclosure Agreement; provided that the audited financial statements of the Issuer may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the fiscal year changes for the Issuer, the Issuer shall give notice of such change in the same manner as for a Listed Event under Section 5 hereof.

(b) Not later than fifteen (15) Business Days prior to the dates specified in subsection (a) for providing the Annual Report to each Repository, the Issuer shall provide its respective Annual Report to the Dissemination Agent. If by such date, the Dissemination Agent has not received a copy of the Annual Report from the Issuer, the Dissemination Agent shall contact the Issuer to determine if the Issuer is in compliance with the first sentence of this subsection (b).

(c) If the Dissemination Agent is unable to verify that an Annual Report of the Issuer has been provided to each Repository by the date required in subsection (a), the Dissemination Agent shall send a notice to each Repository and the MSRB (if the MSRB is not a Repository) in substantially the form attached as Exhibit A.

(d) The Dissemination Agent shall:

(1) determine each year prior to the date for providing the Annual Report the name and address of each Repository and then-applicable rules and procedures for filing the Annual Report with each Repository, if any; and

(2) file a report with the Issuer certifying that the Annual Report has been provided pursuant to this Disclosure Agreement, stating the date it was provided and listing each Repository to which it was provided.

SECTION 4. Content of Annual Reports.

(a) The Issuer’s Annual Report shall contain or include by reference the following:

(1) The audited financial statements of the Issuer for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board and where not in conflict with the Financial Accounting Standards Board (“FASB”) pronouncements or accounting principles prescribed by FASB. If the Issuer’s audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the

Annual Report shall contain unaudited financial statements, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.

(2) An update of the following types of information contained in Appendix A to the official statement, dated _____, 2024 and related to the 2024 Series N Bonds:

(i) The table entitled “Power Supply Resources.”

(ii) The table entitled “Projected Requirements and Resources to Meet Load Requirements.”

(iii) The table entitled “Average Class Rates” (to the extent such table relates to rates and revenues of the Issuer).

(iv) The table entitled “Selected Operating Data.”

(v) The table entitled “Unconsolidated Financial Data.”

(vi) The balance in the Decommissioning Trust Fund, the current estimate of decommissioning costs, the decommissioning costs to date, and the annual contribution level to the Decommissioning Trust Fund, all relating to the Rancho Seco Nuclear Power Plant.

(vii) The table entitled “Estimated Capital Requirements.”

(b) Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the Issuer or public entities related thereto, which have been submitted to each Repository or the Securities and Exchange Commission. If the document included by reference is a final official statement, it must be available from the MSRB. The Issuer shall clearly identify each such other document so included by reference.

SECTION 5. Reporting of Listed Events.

(a) Pursuant to the provisions of this Section 5, the Issuer shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the 2024 Series N Bonds not later than ten (10) business days after the occurrence of the event:

(1) principal and interest payment delinquencies;

(2) non-payment related defaults, if material;

(3) unscheduled draws on any applicable debt service reserves reflecting financial difficulties;

(4) unscheduled draws on credit enhancement reflecting financial difficulties;

(5) substitution of credit or liquidity providers, or their failure to perform;

(6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701 TEB) or other material notices or determinations with respect to the tax status of the 2024 Series N Bonds or other material events adversely affecting the tax status of the 2024 Series N Bonds;

- (7) modifications to rights of Bondholders, if material;
- (8) bond calls, if material, and tender offers;
- (9) defeasances;
- (10) release, substitution or sale of property securing repayment of the 2024 Series N Bonds, if material;
- (11) rating changes;
- (12) bankruptcy, insolvency, receivership or similar event of the Issuer;
- (13) the consummation of a merger, consolidation, or acquisition involving the Issuer or the sale of all or substantially all of the assets of the Issuer, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (14) appointment of a successor or additional trustee or the change of name of the Trustee, if material;
- (15) incurrence of a Financial Obligation of the Issuer, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Issuer, any of which affect Bondholders, if material; and
- (16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Issuer, any of which reflect financial difficulties.

(b) For the purpose of the event identified in Section 5(a)(12), the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Issuer in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Issuer, or if such jurisdiction has been assumed by leaving the existing governmental body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Issuer.

(c) Whenever the Issuer obtains knowledge of the occurrence of a Listed Event, the Issuer shall as soon as possible determine if such event is required to be reported pursuant to this Section 5.

(d) If the Issuer has determined that such event is required to be reported pursuant to this Section 5, the Issuer shall promptly notify the Dissemination Agent in writing. Such notice shall instruct the Dissemination Agent to report the occurrence pursuant to subsection (e).

(e) If the Dissemination Agent has been instructed by the Issuer to report the occurrence of a Listed Event, the Dissemination Agent shall file a notice of such occurrence with the MSRB (if the MSRB is not a Repository) and each Repository.

SECTION 6. Termination of Reporting Obligation. The obligations of the Issuer and the Dissemination Agent under this Disclosure Agreement shall terminate upon the legal defeasance, prior redemption or payment in full of all of the 2024 Series N Bonds. If such termination occurs prior to the final maturity of the 2024 Series N Bonds, the Issuer shall give notice of such termination in the same manner as for a Listed Event under Section 5.

SECTION 7. Dissemination Agent; Filings.

(a) The Issuer may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Agreement, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the Issuer pursuant to this Disclosure Agreement. If at any time there is not any other designated Dissemination Agent, the Issuer shall be the Dissemination Agent. The initial Dissemination Agent shall be U.S. Bank Trust Company, National Association.

(b) Unless and until one or more different or additional Repositories are designated or authorized by the Securities and Exchange Commission, all filings with a Repository which are required by this Disclosure Agreement shall be filed with the MSRB through EMMA and shall be in an electronic format and accompanied by such identifying information as prescribed by the MSRB in accordance with the Rule.

SECTION 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Agreement, the Issuer and the Dissemination Agent may amend this Disclosure Agreement, and any provision of this Disclosure Agreement may be waived, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions of Sections 3(a), 4, or 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the 2024 Series N Bonds, or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the 2024 Series N Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver either (1) is approved by the Holders of 60% of the 2024 Series N Bonds, or (2) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Holders or Beneficial Owners of the 2024 Series N Bonds.

In the event of any amendment or waiver of a provision of this Disclosure Agreement, the Issuer shall describe such amendment in its next respective Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or, in the case of a change of accounting principles from those described in Section 4(a)(1), on the presentation) of financial information or operating data being presented by the Issuer. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (1) notice of such change shall be given in the same manner as for a Listed Event under Section 5, and (2) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

SECTION 9. Additional Information. Nothing in this Disclosure Agreement shall be deemed to prevent the Issuer from disseminating any other information, using the means of dissemination set forth in this Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Agreement. If the Issuer chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Agreement, the Issuer shall have no obligation under this Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

SECTION 10. Default. In the event of a failure of the Issuer or the Trustee to comply with any provision of this Disclosure Agreement, the Trustee shall, at the request of any Participating Underwriters or the Holders of at least 25% aggregate principal amount of Outstanding Bonds and upon being indemnified to its satisfaction from and against any costs, liability, expenses and fees of the Trustee, including, without limitation fees and expenses of its attorneys, or any Holder or Beneficial Owner of the 2024 Series N Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Issuer or the Dissemination Agent, as the case may be, to comply with its obligations under this Disclosure Agreement. A default under this Disclosure Agreement shall not be deemed an Event of Default under the Resolution, and the sole remedy under this Disclosure Agreement in the event of any failure of the Issuer or the Dissemination Agent to comply with this Disclosure Agreement shall be an action to compel performance.

SECTION 11. Duties, Immunities and Liabilities of Dissemination Agent. The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement, and the Issuer agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys' fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's negligence or willful misconduct. The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement and no implied duties for obligation shall be read into this Disclosure Agreement against the Dissemination Agent. The Dissemination Agent has no power to enforce nonperformance on the part of the Issuer. The Dissemination Agent shall be paid compensation by the Issuer for its services provided hereunder in accordance with its schedule of fees provided to the Issuer and all expenses, legal fees and costs of the Dissemination Agent made or incurred by the Dissemination Agent in the performance of its duties hereunder. The obligations of the Issuer under this Section shall survive resignation or removal of the Dissemination Agent and payment of the 2024 Series N Bonds.

SECTION 12. Notices. Any notices or communications to or among any of the parties to this Disclosure Agreement may be given as follows:

To the Issuer:	Sacramento Municipal Utility District 6201 S Street, MS B405 Sacramento, California 95817 Attention: Treasurer Telephone: (916) 732-6509 Fax: (916) 732-5835
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To the Dissemination Agent: U.S. Bank Trust Company, National Association
Global Corporate Trust
One California Street, Suite 1000
San Francisco, California 94111
Telephone: (415) 677-3699
Fax: (415) 677-3769

To the Trustee: U.S. Bank Trust Company, National Association
Global Corporate Trust
One California Street, Suite 1000
San Francisco, California 94111
Telephone: (415) 677-3699
Fax: (415) 677-3769

The Issuer, the Dissemination Agent and the Trustee may, by giving written notice hereunder to the other person listed above, designate a different address or telephone number(s) to which subsequent notices or communications should be sent. Unless specifically otherwise required by the context of this Disclosure Agreement, a party may give notice by any form of electronic transmission capable of producing a written record. Each such party shall file with the Trustee and Dissemination Agent information appropriate to receiving such form of electronic transmission.

SECTION 13. Beneficiaries. This Disclosure Agreement shall inure solely to the benefit of the Issuer, the Dissemination Agent, the Participating Underwriters and Holders and Beneficial Owners from time to time of the 2024 Series N Bonds, and shall create no rights in any other person or entity.

SECTION 14. Counterparts. This Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

Dated: _____, 2024.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By _____
Treasurer

U.S. BANK TRUST COMPANY, NATIONAL
ASSOCIATION,
as Dissemination Agent

By _____
Authorized Officer

ACKNOWLEDGED:

U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION, as Trustee

By: _____
Authorized Officer

EXHIBIT A

NOTICE TO REPOSITORIES OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: Sacramento Municipal Utility District
Name of Bond Issue: Electric Revenue Refunding Bonds, 2024 Series N
Name of Borrower: Sacramento Municipal Utility District
Date of Issuance: _____, 2024

NOTICE IS HEREBY GIVEN that the Sacramento Municipal Utility District (the “Issuer”) has not provided an Annual Report with respect to the above-named Bonds as required by Section 146.11 of Resolution No. 24-03-[] adopted March 21, 2024, by the Issuer. [The Issuer anticipates that the Annual Report will be filed by _____.]

Dated: _____

U.S. BANK TRUST COMPANY, NATIONAL
ASSOCIATION,
on behalf of Sacramento Municipal Utility District

cc: Sacramento Municipal Utility District

SSS No. TR24-006

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date ERCS March 20, 2024
Board Meeting Date March 21, 2024

TO				TO							
1.	Russell Mills	6.	Suresh Kotha								
2.	Scott Martin	7.									
3.	Brandy Bolden	8.									
4.	Frankie McDermott	9.	Legal								
5.	Lora Anguay	10.	CEO & General Manager								
Consent Calendar		Yes	<input checked="" type="checkbox"/>	No <i>If no, schedule a dry run presentation.</i>		Budgeted	<input checked="" type="checkbox"/>	Yes	No <i>(If no, explain in Cost/Budgeted section.)</i>		
FROM (IPR) Alex Fastovich				DEPARTMENT Treasury				MAIL STOP B355	EXT. 6509	DATE SENT 3/5/24	

NARRATIVE:

Requested Action: Authorize the Chief Executive Officer and General Manager, or his designee to approve the inclusion of SMUD’s disclosure information (Appendix A) in the Preliminary Official Statement pursuant to the commodity prepay transaction with the Northern California Energy Authority (NCEA) as the bond issuer and execute the Commodity Supply Agreement and any other related documents necessary to facilitate this transaction.

Summary: SMUD entered into a 30 year commodity supply agreement with NCEA in 2018 for an initial 5-year term. NCEA is refunding and extending the original transaction to a new 6-8 year term which will allow SMUD to save as much as \$3 million annually, depending on market conditions at pricing. The commodity supply agreement allows for maximum flexibility where SMUD can receive fuel, electricity, or novate an existing renewable power purchase agreement or novate a supply of biogas. It also provides SMUD the opportunity to switch to from natural gas to one of the other commodity types prior to 2029 if desired.

Approval of SMUD’s disclosure information will allow NCEA to issue the bonds, and the Commodity Supply Agreement will allow SMUD to purchase natural gas or electricity at a discount, with J.Aron (Goldman Sachs) as the gas/electricity supplier.

Board Policy: SD-2 Competitive Rates, SD-3 Access to Credit Markets
(Number & Title)

Benefits: SMUD expects to purchase gas/electricity from NCEA at rates lower than index prices.

Cost/Budgeted: All fees are expected to be paid by the transaction.

Alternatives: Forgo the prepay transaction and associated savings.

Affected Parties: Legal, Energy Trading & Contracts, Accounting, Treasury

Coordination: Treasury

Presenter: Russell Mills, Director, Treasury Operations & Commodity Risk Management, and Treasurer

Additional Links:

SUBJECT Commodity Supply Agreement Preliminary Official Statement	ITEM NO. (FOR LEGAL USE ONLY) 11
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

**DRAFT SMUD RESOLUTION AUTHORIZING THE
EXECUTION AND DELIVERY OF AN AMENDED & RESTATED
COMMODITY SUPPLY CONTRACT WITH NCEA AND
AUTHORIZING THE EXECUTION OF RELATED
DOCUMENTS**

RESOLUTION NO. _____

RESOLUTION OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT AUTHORIZING THE EXECUTION AND DELIVERY OF AN AMENDED & RESTATED COMMODITY SUPPLY CONTRACT WITH THE NORTHERN CALIFORNIA ENERGY AUTHORITY; THE EXECUTION AND DELIVERY OF CERTAIN OTHER DOCUMENTS IN CONNECTION WITH THE ISSUANCE OF THE NORTHERN CALIFORNIA ENERGY AUTHORITY COMMODITY SUPPLY REVENUE BONDS, SERIES 2024; AND CERTAIN OTHER ACTIONS IN CONNECTION THEREWITH

WHEREAS, pursuant to the provisions of the Joint Exercise of Powers Act, constituting Chapter 5 of Division 7 of Title 1 (commencing with Section 6500) of the California Government Code, as amended and supplemented (the “Act”), the Sacramento Municipal Utility District (“SMUD”) and the Sacramento Municipal Utility District Financing Authority entered into a joint powers agreement (the “Agreement”) pursuant to which the Northern California Energy Authority (the “Issuer”) was organized for the purpose, among other things, of entering into contracts and issuing bonds to assist SMUD in financing the acquisition of supplies of gas and electricity;

WHEREAS, the Issuer is authorized by the Act and its Agreement to acquire supplies of gas and electricity by any means and to issue revenue bonds to finance the cost of acquisition of such supplies and refund bonds previously issued by it for such purpose, and is vested with all powers necessary to accomplish the purposes for which it was created;

WHEREAS, SMUD previously determined that it was desirable to acquire a long-term supply of gas and electricity from the Issuer;

WHEREAS, the Issuer previously determined to purchase certain quantities of gas and electricity from J. Aron & Company LLC (“J. Aron”) on a prepaid basis (the “Original Project”) and to sell such gas and electricity to SMUD;

WHEREAS, to finance the costs of the Original Project, the Issuer previously issued its Commodity Supply Revenue Bonds, Series 2018, which are currently outstanding in the aggregate principal amount of \$537,295,000 (the “Prior Bonds”);

WHEREAS, the Issuer has determined to refinance the costs of the Original Project by refunding the Prior Bonds and, in connection therewith, the Issuer has determined to replace J. Aron with Aron Energy Prepay 33 LLC (“Prepay LLC”) as the supplier of the prepaid gas and electricity constituting the Original Project;

WHEREAS, SMUD has determined that it is desirable to acquire an additional long-term supply of gas and electricity from the Issuer; and

WHEREAS, the Issuer has determined to purchase certain additional quantities of gas and electricity from Prepay LLC on a prepaid basis (the “New Project”) and to sell such additional quantities of gas and electricity to SMUD;

WHEREAS, to refund the Prior Bonds and finance the costs of the New Project, the Issuer has determined to issue its Commodity Supply Revenue Bonds, Series 2024, in one or more series or subseries (collectively, the “Bonds”);

WHEREAS, SMUD has determined to authorize the officers of SMUD to take all necessary action to accomplish the purchase of gas and electricity from the Issuer and to assist the Issuer in the refunding of the Prior Bonds and the issuance, sale and delivery of the Bonds; and

WHEREAS, there have been made available to the Board of Directors of SMUD the following documents and agreements:

1. A proposed form of Amended and Restated Trust Indenture (the “Indenture”), between the Issuer and Computershare Trust Company, N.A., successor to Wells Fargo Bank, National Association (the “Trustee”);
2. A proposed form of Amended & Restated Prepaid Commodity Sales Agreement (the “Prepaid Commodity Agreement”) between the Issuer and Prepay LLC;
3. A proposed form of Amended & Restated Commodity Supply Contract (the “Supply Contract”) between the Issuer and SMUD;
4. A proposed form of Amended & Restated Re-Pricing Agreement (the “Re-Pricing Agreement”) between Prepay LLC and the Issuer;
5. A proposed form of Novation Agreement relating to the Prepaid Commodity Agreement and the Re-Pricing Agreement among the Issuer, J. Aron, Prepay LLC and the Trustee;
6. A proposed form of SPE Master Custodial Agreement among Prepay LLC, J. Aron, the Issuer and The Bank of New York Mellon, as custodian;
7. A proposed form of a Bond Purchase Contract, to be dated the date of sale of the Bonds between Goldman Sachs & Co. LLC, as the sole underwriter or as representative of the underwriters (collectively, the “Underwriters”), and the Issuer; and
8. A proposed form of an official statement (the “Official Statement”) to be used by the Underwriters in connection with the offering and sale of the Bonds.

NOW THEREFORE, BE IT RESOLVED by the Board of Directors of the Sacramento Municipal Utility District, as follows:

Section 1. The proposed form of the Supply Contract, as made available to the Board of Directors for this meeting, is hereby approved. Any of the Chief Executive Officer and General Manager, any Member of the Executive Committee, the Treasurer, the Secretary or the Chief Financial Officer or the designee of any such officer (each an "Authorized Officer") is hereby authorized and directed, for and on behalf of SMUD, to execute and deliver such agreement in substantially said form, with such changes and insertions therein as the Authorized Officer executing the same may approve, such approval to be conclusively evidenced by the execution and delivery thereof.

Section 2. The proposed preliminary form of the Official Statement, as made available to the Board of Directors for this meeting, is hereby approved. Any Authorized Officer is hereby authorized and directed, for and on behalf of SMUD, to execute and deliver a certificate deeming the preliminary form of the Official Statement final for purposes of Securities and Exchange Commission Rule 15c2-12 and to approve the use of the Official Statement in substantially said form, with such changes and insertions therein as the Authorized Officer approving the same may deem necessary or appropriate. The Underwriters are hereby authorized to distribute the Official Statement in preliminary form to persons who may be interested in the purchase of the Bonds, and to deliver the Official Statement in final form to the purchasers of the Bonds, in each case with such changes as may be approved as aforesaid.

Section 3. The Authorized Officers, each acting alone, are hereby authorized and directed, for and in the name and on behalf of SMUD, to execute and deliver any and all documents, including, without limitation, any tax certificate or agreement relating to the Bonds, any continuing disclosure certificate or agreement relating to the Bonds, and any and all documents and certificates to be executed in connection with securing credit support, if any, for the Bonds or investing proceeds of the Bonds or other moneys held under the Indenture and to do any and all things and take any and all actions which may be necessary or advisable, in their discretion, to effectuate the actions which SMUD has approved in this Resolution, for the refunding of the Prior Bonds and for the issuance, sale and delivery of the Bonds, and to consummate by SMUD the transactions contemplated by the documents approved hereby, including any subsequent amendments, waivers or consents entered into or given under or in accordance with such documents.

Section 4. All actions heretofore taken by the Authorized Officers with respect to the issuance of the Bonds and the transactions contemplated by the documents approved hereby are hereby ratified, confirmed and approved.

Section 5. The Board of Directors hereby approves the execution and delivery of all agreements, documents, certificates and instruments referred to herein with electronic signatures as may be permitted under the California Uniform Electronic Transactions Act and digital signatures as may be permitted under Section 16.5 of the California Government Code using DocuSign.

Section 6. This Resolution shall take effect immediately.

DRAFT AMENDED AND RESTATED TRUST INDENTURE

AMENDED AND RESTATED TRUST INDENTURE

between

NORTHERN CALIFORNIA ENERGY AUTHORITY

and

COMPUTERSHARE TRUST COMPANY, N.A.,
as Trustee

\$ _____
COMMODITY SUPPLY REVENUE [REFUNDING] BONDS, SERIES 2024

Dated as of _____ 1, 2024

TABLE OF CONTENTS

SECTION	HEADING	PAGE
ARTICLE I	DEFINITIONS AND GOVERNING LAW	3
Section 1.1	Definitions.....	3
Section 1.2	Captions	28
Section 1.3	Rules of Construction	28
Section 1.4	Governing Law	29
Section 1.5	Consents.....	29
ARTICLE II	AUTHORIZATION AND ISSUANCE OF BONDS.....	29
Section 2.1	Authorization of Bonds and Refunding; Application of Proceeds	29
Section 2.2	Terms of Series 2024 Bonds; Payment.....	30
Section 2.3	Conditions for Issuance of Bonds.....	32
Section 2.4	Initial Interest Rate Periods; Subsequent Interest Rate Periods.....	33
Section 2.5	Daily Interest Rate Period.....	33
Section 2.6	Weekly Interest Rate Period	34
Section 2.7	Fixed Rate Period.....	36
Section 2.8	Commercial Paper Interest Rate Periods	38
Section 2.9	Index Rate Periods	40
Section 2.10	Notice of Conversion	43
Section 2.11	Liquidity Facility	45
Section 2.12	Provisions Regarding Commodity Swap	45
Section 2.13	Provisions Regarding Interest Rate Swap.....	47
ARTICLE III	GENERAL TERMS AND PROVISIONS OF BONDS.....	48
Section 3.1	Medium of Payment; Form and Date; Letters and Numbers.....	48
Section 3.2	Legends.....	48
Section 3.3	Execution and Authentication.....	48
Section 3.4	Exchange, Transfer and Registry.....	49
Section 3.5	Regulations with Respect to Exchanges and Registration of Transfers	49
Section 3.6	Bonds Mutilated, Destroyed, Stolen or Lost.....	50
Section 3.7	Temporary Bonds.....	50
Section 3.8	Payment of Interest on Bonds; Interest Rights Preserved.....	51
Section 3.9	Book Entry System; Appointment of Securities Depository	51
ARTICLE IV	REDEMPTION OF BONDS AND TENDER PROVISIONS	53
Section 4.1	Extraordinary Redemption.....	53
Section 4.2	Sinking Fund Redemption	54
Section 4.3	Optional Redemption	54
Section 4.4	Redemption Notice	55
Section 4.5	Bonds Redeemed in Part.....	56
Section 4.6	Redemption at the Election or Direction of the Issuer.....	57
Section 4.7	Redemption Other than at the Issuer’s Election or Direction.....	57

SECTION	HEADING	PAGE
Section 4.8	Selection of Bonds to Be Redeemed.....	57
Section 4.9	Payment of Redeemed Bonds	57
Section 4.10	Cancellation and Destruction of Bonds	58
Section 4.11	Optional Tender During Daily or Weekly Interest Rate Periods.....	58
Section 4.12	Mandatory Tender for Purchase on Day Next Succeeding the Last Day of Each CP Interest Term.....	59
Section 4.13	Mandatory Tender for Purchase on the Index Rate Tender Date or Fixed Rate Tender Date	59
Section 4.14	Mandatory Tender for Purchase on Conversion of Interest Rate Period	59
Section 4.15	General Provisions Relating to Tenders	60
Section 4.16	Notice of Mandatory Tender for Purchase.....	62
Section 4.17	Irrevocable Notice Deemed to Be Tender of Bond; Undelivered Bonds	63
Section 4.18	Remarketing of Bonds; Notice of Interest Rates	64
Section 4.19	The Remarketing Agent.....	64
Section 4.20	Qualifications of Remarketing Agent; Resignation; Removal	64
Section 4.21	Successor Remarketing Agents.....	65
Section 4.22	Tender Agent	65
ARTICLE V	ESTABLISHMENT OF FUNDS AND APPLICATION THEREOF	66
Section 5.1	The Pledge Effected by this Indenture.....	66
Section 5.2	Establishment of Funds and Accounts.....	66
Section 5.3	Project Fund.....	67
Section 5.4	Revenues and Revenue Fund; Deposits of Other Amounts.....	69
Section 5.5	Payments from Revenue Fund.....	70
Section 5.6	Operating Fund	71
Section 5.7	Debt Service Fund – Debt Service Account	72
Section 5.8	Debt Service Fund – Redemption Account	75
Section 5.9	Debt Service Fund – Debt Service Reserve Account	75
Section 5.10	Termination and Breakage Accounts.....	76
Section 5.11	General Fund.....	77
Section 5.12	Commodity Remarketing Reserve Fund.....	78
Section 5.13	Assignment Payment Fund	79
Section 5.14	Purchases of Bonds	79
ARTICLE VI	DEPOSITORIES OF MONEYS, SECURITY FOR DEPOSITS AND INVESTMENT OF FUNDS.....	79
Section 6.1	Depositories	79
Section 6.2	Deposits.....	79
Section 6.3	Investment of Certain Funds.....	80
Section 6.4	Valuation and Sale of Investments	82
ARTICLE VII	PARTICULAR COVENANTS OF THE ISSUER.....	83

SECTION	HEADING	PAGE
Section 7.1	Payment of Bonds	83
Section 7.2	Extension of Payment of Bonds.....	83
Section 7.3	Offices for Servicing Bonds.....	83
Section 7.4	Further Assurance	83
Section 7.5	Power to Issue Bonds and Pledge the Trust Estate	83
Section 7.6	Power to Enter Into and Perform the Commodity Supply Contract	84
Section 7.7	Creation of Liens.....	84
Section 7.8	Limitations on Operating Expenses and Other Costs	84
Section 7.9	Fees and Charges	84
Section 7.10	Commodity Supply Contract; Commodity Remarketing	85
Section 7.11	Commodity Purchase Agreement; Commodity Supplier Guaranty.....	86
Section 7.12	Trustee as Agent	87
Section 7.13	Issuer Commodity Swap.....	87
Section 7.14	Interest Rate Swap	88
Section 7.15	Accounts and Reports	88
Section 7.16	Payment of Taxes and Charges.....	89
Section 7.17	Tax Covenants	89
Section 7.18	General.....	90
Section 7.19	Bankruptcy	90
Section 7.20	Bylaws.....	91
Section 7.21	Avoidance of Failed Remarketing	91
ARTICLE VIII	EVENTS OF DEFAULT AND REMEDIES	91
Section 8.1	Events of Default	91
Section 8.2	Accounting and Examination of Records after Default.....	93
Section 8.3	Enforcement of Agreements; Application of Moneys after Default....	93
Section 8.4	Appointment of Receiver.....	95
Section 8.5	Proceedings Brought by Trustee.....	95
Section 8.6	Restriction on Bondholder’s Action	96
Section 8.7	Remedies Not Exclusive	96
Section 8.8	Effect of Waiver and Other Circumstances	96
Section 8.9	Notice of Default.....	97
ARTICLE IX	CONCERNING THE FIDUCIARIES	97
Section 9.1	Acceptance by Trustee of Duties	97
Section 9.2	Paying Agents; Appointment and Acceptance of Duties.....	97
Section 9.3	Responsibilities of Fiduciaries.....	97
Section 9.4	Evidence on Which Fiduciaries May Act	99
Section 9.5	Compensation	100
Section 9.6	Certain Permitted Acts.....	100
Section 9.7	Resignation of Trustee	100
Section 9.8	Removal of the Trustee.....	101
Section 9.9	Appointment of Successor Trustee	101
Section 9.10	Transfer of Rights and Property to Successor Trustee.....	101
Section 9.11	Merger or Consolidation.....	102

SECTION	HEADING	PAGE
Section 9.12	Adoption of Authentication	102
Section 9.13	Resignation or Removal of Paying Agent and Appointment of Successor.....	102
Section 9.14	Trustee’s Reliance.....	103
Section 9.15	Trustee’s Liability	103
Section 9.16	Trustee’s Agents or Attorneys	104
Section 9.17	Lien Filings	104
ARTICLE X	SUPPLEMENTAL INDENTURES	105
Section 10.1	Supplemental Indentures Not Requiring Consent of Bondholders....	105
Section 10.2	Supplemental Indentures Effective with Consent of Bondholders....	106
Section 10.3	General Provisions	106
ARTICLE XI	AMENDMENTS.....	108
Section 11.1	Mailing.....	108
Section 11.2	Powers of Amendment.....	108
Section 11.3	Consent of Bondholders.....	108
Section 11.4	Notifications by Unanimous Consent	109
Section 11.5	Exclusion of Bonds	110
Section 11.6	Notation on Bonds	110
ARTICLE XII	MISCELLANEOUS	110
Section 12.1	Defeasance	110
Section 12.2	Evidence of Signatures of Bondholders and Ownership of Bonds....	113
Section 12.3	Moneys Held for Particular Bonds	114
Section 12.4	Preservation and Inspection of Documents.....	114
Section 12.5	Parties Interested Herein	115
Section 12.6	No Recourse on the Bonds.....	115
Section 12.7	Publication of Notice; Suspension of Publication	115
Section 12.8	Severability of Invalid Provisions.....	115
Section 12.9	Holidays	115
Section 12.10	Notices	115
Section 12.11	Notices to Rating Agencies.....	116
Section 12.12	Counterparts	116
Section 12.13	Waiver of Jury Trial.....	116

SECTION	HEADING	PAGE
EXHIBIT A	— FORM OF SERIES 2024 BONDS	
EXHIBIT B	— FORM OF INDEX RATE DETERMINATION CERTIFICATE	
EXHIBIT C	— FORM OF INDEX RATE CONTINUATION NOTICE	
EXHIBIT D	— FORM OF ISSUER DIRECTION LETTER AND CONDITIONAL OPTIONAL REDEMPTION NOTICE	
EXHIBIT E	— FORM OF ISSUER DIRECTION LETTER AND CONDITIONAL MANDATORY REDEMPTION NOTICE (EXTRAORDINARY REDEMPTIONS)	
SCHEDULE I	— INITIAL PROJECT PARTICIPANT	
SCHEDULE II	— SCHEDULED DEBT SERVICE DEPOSITS	
SCHEDULE III	— TERMS OF ISSUER COMMODITY SWAP	
SCHEDULE IV	— AMORTIZED VALUE OF THE SERIES 2024 BONDS	

THIS AMENDED AND RESTATED TRUST INDENTURE, dated as of _____ 1, 2024 (this “*Indenture*”), is entered into by and between NORTHERN CALIFORNIA ENERGY AUTHORITY, a joint powers authority and public entity of the State of California (the “*Issuer*”) and COMPUTERSHARE TRUST COMPANY, N.A., successor to Wells Fargo Bank, National Association, a national banking association duly organized and existing under the laws of the United States of America authorized by law to accept and execute trusts of the character set out in this Indenture, as trustee (the “*Trustee*”),

WITNESSETH:

WHEREAS, capitalized terms used, and not otherwise defined, in the following recitals and granting clauses have the meaning assigned to such capitalized terms in Section 1.1; and

WHEREAS, pursuant to the provisions of the Joint Exercise of Powers Act, constituting Chapter 5 of Division 7 of Title 1 (commencing with Section 6500) of the California Government Code, as amended and supplemented, the Sacramento Municipal Utility District (“SMUD”) and the Sacramento Municipal Utility District Financing Authority entered into a joint powers agreement pursuant to which the Issuer was organized for the purpose, among other things, of entering into contracts and issuing bonds to assist SMUD in financing the acquisition of supplies of natural gas and electricity; and

WHEREAS, the Issuer is authorized to acquire supplies of natural gas and electricity by any means and to issue revenue bonds to finance the cost of acquisition of such supplies, and is vested with all powers necessary to accomplish the purposes for which it was created; and;

WHEREAS, on December 19, 2018, the Issuer issued its bonds (the “*2018 Revenue Bonds*”) to provide long-term natural gas and electricity supplies to SMUD (the “*Project Participant*”) through advanced payment to J. Aron & Company LLC (the “*Prior Commodity Supplier*”);

WHEREAS, the Issuer now desires to, prior to the mandatory tender date of the 2018 Revenue Bonds, refund the 2018 Revenue Bonds and replace the Prior Commodity Supplier with Aron Energy Prepay 3_ LLC, a Delaware limited liability company (the “*Commodity Supplier*”), and acquire additional volumes of natural gas and electricity supply from the Commodity Supplier for the benefit of the Project Participant through advanced payment to the Commodity Supplier;

WHEREAS, the Issuer now desires to amend and restate the Trust Indenture, dated as of December 1, 2018, between Issuer and the Trustee;

WHEREAS, the Issuer has determined to finance the Cost of Acquisition of the Commodity Project through the issuance of Bonds pursuant to this Indenture;

WHEREAS, the execution and delivery of this Indenture has been in all respects duly and validly authorized and approved by resolution of the governing body of the Issuer; and

WHEREAS, the Trustee is willing to accept the trusts provided for in this Indenture;

NOW, THEREFORE, THIS INDENTURE WITNESSETH, and the Issuer and the Trustee agree as follows for the benefit of the other, and for the benefit of the Holders of the Bonds issued pursuant hereto:

GRANTING CLAUSES

FOR AND IN CONSIDERATION of the premises, the mutual covenants of the Issuer and the Trustee herein, the purchase of the Bonds by the Holders thereof and the obligations of the Interest Rate Swap Counterparty under the Interest Rate Swap, if any, and in order to secure:

- (i) the payment of the principal of and premium, if any, and interest on the Bonds and the payment of the Interest Rate Swap Payments, in each case according to the tenor and effect of the Bonds and the Interest Rate Swap, and
- (ii) the performance and observance by the Issuer of all the covenants expressed or implied herein and in the Bonds,

the Issuer does hereby grant to the Trustee a lien on and a security interest in the Trust Estate and convey, assign and pledge unto the Trustee and its successors in trust, all right, title and interest of the Issuer in and to the Trust Estate, subject to the provisions of this Indenture permitting the application thereof for the purposes and on the terms and conditions set forth in this Indenture and the prior pledge of the Commodity Swap Reserve Account set forth below, and all other rights hereinafter granted for the further securing of the Bonds and the Interest Rate Swap Payments;

FOR AND IN CONSIDERATION of the obligations of the Commodity Swap Counterparty under the Issuer Commodity Swap and the mutual covenants of the Issuer and the Commodity Swap Counterparty thereunder, and in order to secure the payment of the Commodity Swap Payments, the Issuer does hereby convey, assign and pledge unto the Commodity Swap Counterparty and their successors in trust, all right, title and interest of the Issuer in the Commodity Swap Reserve Account and the amounts and investments on deposit therein, which conveyance, assignment and pledge shall be for the equal and proportional benefit of the Commodity Swap Counterparty and shall have priority over the foregoing conveyance, assignment and pledge of the Commodity Swap Reserve Account in favor of the Bonds and the Interest Rate Swap Payments;

TO HAVE AND TO HOLD all the same with all privileges and appurtenances hereby and hereafter conveyed and assigned, or agreed or intended so to be, to the Trustee and its respective successors in said trust and assigns forever;

IN TRUST NEVERTHELESS, upon the terms and trusts herein set forth for the equal and proportionate benefit, security and protection of (i) all Holders of the Bonds without privilege, priority or distinction as to the lien or otherwise of any Bond over any other Bond or the payment of interest with respect to any Bond over the payment of interest with respect to any other Bond, except as otherwise provided herein, and (ii) the Interest Rate Swap Counterparty, if any; and

PROVIDED, HOWEVER, that if the Issuer, its successors or assigns shall well and truly pay, or cause to be paid, the principal or Redemption Price, if any, on the Bonds and the interest due or

to become due thereon, the Commodity Swap Payments and the Interest Rate Swap Payments, at the times and in the manner provided in the Bonds, the Issuer Commodity Swap and any Interest Rate Swap, respectively, according to the true intent and meaning thereof, and shall cause the payments to be made into the Funds as required hereunder, or shall provide, as permitted hereby, for the payment thereof as provided in Section 12.1, and shall well and truly keep and perform and observe all the covenants and conditions of this Indenture to be kept, performed and observed by it, and shall pay or cause to be paid to the Trustee all sums of money due or to become due to it in accordance with the terms and provisions hereof, then upon such final payments or provisions for such payments by the Issuer, the Bonds, the Issuer Commodity Swap and any Interest Rate Swap shall cease to be entitled to any lien, benefit or security under this Indenture, and all covenants, agreements and obligations of the Issuer to the Holders of such Bonds shall thereupon cease, terminate and be discharged and satisfied; otherwise this Indenture shall remain in full force and effect.

The terms and conditions upon which the Bonds are to be issued, authenticated, delivered, secured and accepted by all Persons who from time to time shall be or become the Holders thereof, and the trusts and conditions upon which the Revenues, moneys, securities and funds held or set aside under this Indenture, subject to the provisions of this Indenture permitting the application thereof for the purposes and on the terms and conditions set forth in this Indenture, are to be held and disposed of, which said trusts and conditions the Trustee hereby accepts, and the respective parties hereto covenant and agree, are as follows:

ARTICLE I

DEFINITIONS AND GOVERNING LAW

Section 1.1. Definitions. The following terms shall, for all purposes of this Indenture, have the following meanings:

“*Account*” or “*Accounts*” means, as the case may be, each or all of the Accounts established in Section 5.2 or Section 4.15(a).

“*Accountant’s Certificate*” means a certificate signed by an independent certified public accountant or a firm of independent certified public accountants, selected by the Issuer, who may be the accountant or firm of accountants who regularly audit the books of the Issuer and must be identified upon selection in writing to the Trustee.

“*Acquisition Account*” means the Acquisition Account in the Project Fund established pursuant to Section 5.2.

“*Act*” means the Joint Exercise of Powers Act constituting Chapter 5 of Division 7 of Title 1 (commencing with Section 6500), as amended or supplemented from time to time.

“*Additional Termination Payment*” has the meaning given to such term in the Commodity Purchase Agreement.

“Alternate Liquidity Facility” means a Liquidity Facility for a Series of Bonds delivered to the Trustee in substitution for a Liquidity Facility then in effect with respect to such Bonds.

“Amortized Value” means, with respect to any Series 2024 Bond to be redeemed when a Fixed Rate Period is in effect with respect to such Bond, the principal amount of such Bond multiplied by the price of such Bond expressed as a percentage, calculated by a major market maker in municipal securities, as the quotation agent, selected by the Issuer, based on the industry standard method of calculating bond prices (as such industry standard prevails on the date of delivery of the Bonds), with a delivery date equal to the date of redemption, a maturity date equal to the earlier of (a) the stated maturity date of such Bond or (b) the Fixed Rate Tender Date of such Bond and a yield equal to such Bond’s original reoffering yield, which, in the case of the Series 2024 Bonds and certain dates, produces the amounts for all of the Series 2024 Bonds set forth in Schedule IV.

“Applicable Factor” means (a) with respect to the initial issuance of a Series of Bonds bearing interest at a SOFR Index Rate, the percentage or factor of the SOFR Index determined by the Underwriter and specified in the Index Rate Determination Certificate for such Series of Bonds, or (b) with respect to a Series of Bonds for which the Interest Rate Period is being converted to a SOFR Index Rate Period (including a change in such Interest Rate Period from one SOFR Index Rate Period to another SOFR Index Rate Period), the percentage or factor of the SOFR Index determined by the Remarketing Agent and specified in the applicable Index Rate Determination Certificate or Index Rate Continuation Notice, *provided in each case* that the Issuer delivers to the Trustee a Favorable Opinion of Bond Counsel addressing the selection of such percentage or factor. The Applicable Factor shall be determined by the Underwriter or the Remarketing Agent, as applicable, in accordance with Section 2.9(a) and included in the applicable Index Rate Determination Certificate, and once determined shall remain constant for the duration of the applicable SOFR Index Rate Period.

“Applicable Spread” means, with respect to a Series of Bonds for which the Initial Interest Rate Period is an Index Rate Period, or for any Series of Bonds for which the Interest Rate Period is converted to an Index Rate Period, the margin or spread, which may be positive or negative, determined by the Underwriter or the Remarketing Agent, as applicable, in accordance with Section 2.9(a) on or prior to the Issue Date or Conversion Date for such Bonds, as applicable, and specified in the applicable Supplemental Indenture or Index Rate Determination Certificate or Index Rate Continuation Notice, as applicable, which shall be added to the applicable Index (or the product of the Applicable Factor and the applicable Index, as the case may be) to determine the Index Rate. The Applicable Spread shall remain constant for the duration of the applicable Index Rate Period. Once so determined, the Applicable Spread shall remain constant for the duration of the applicable Index Rate Period.

“Applicable Tax-Exempt Municipal Bond Rate” means, for the Series 2024 Bonds of any maturity, the “Comparable AAA General Obligations” yield curve rate for the year of such maturity or Mandatory Purchase Date, as applicable, as published by Refinitiv Global Markets, Inc. one Business Day prior to the date that notice of redemption is required to be given pursuant to Section 4.4. If no such yield curve rate is established for the applicable year, the “Comparable AAA General Obligations” yield curve rate for the two published maturities most closely

corresponding to the applicable year shall be determined, and the Applicable Tax-Exempt Municipal Bond Rate will be interpolated or extrapolated from those yield curve rates on a straight-line basis. This rate is made available daily by Refinitiv Global Markets, Inc. and is available to its subscribers through the internet address: www.tm3.com. In calculating the Applicable Tax-Exempt Municipal Bond Rate, should Refinitiv Global Markets, Inc. no longer publish the “Comparable AAA General Obligations” yield curve rate, then the Applicable Tax-Exempt Municipal Bond Rate shall equal the Consensus Scale yield curve rate for the applicable year. The Consensus Scale yield curve rate is made available daily by Municipal Market Analytics and is available to its subscribers through its internet address: www.mma-research.com. In the further event Municipal Market Analytics no longer publishes the Consensus Scale, the Applicable Tax-Exempt Municipal Bond Rate shall be determined by a major market maker in municipal securities, as the quotation agent, based upon the rate per annum equal to the annual yield to maturity, calculated using semi-annual compounding, of those tax-exempt general obligation bonds rated in the highest Rating Category by Moody’s and S&P with a maturity date equal to the stated maturity date or Mandatory Purchase Date, as applicable, of such Bonds having characteristics (other than the ratings) most comparable to those of such Bonds in the judgment of the quotation agent. The quotation agent’s determination of the Applicable Tax-Exempt Municipal Bond Rate shall be final and binding in the absence of manifest error on all parties and may be conclusively relied upon in good faith by the Trustee.

“*Assignment Payment*” means any payment received from the Commodity Supplier in connection with an assignment of the Commodity Purchase Agreement to a replacement commodity supplier.

“*Assignment Payment Fund*” means the Assignment Payment Fund established in Section 5.2.

“*Authorized Denominations*” means with respect to any (a) Fixed Rate Period or Index Rate Period, \$5,000 and any integral multiple thereof, and (b) Commercial Paper Interest Rate Period, Daily Interest Rate Period or Weekly Interest Rate Period, \$100,000 and any integral multiple of \$5,000 in excess of \$100,000.

“*Authorized Newspaper*” means *The Wall Street Journal* or *The Bond Buyer* or any other newspaper or journal printed in the English language and customarily published on each Business Day devoted to financial news and selected by the Issuer, with the written approval of the Trustee, whose decision shall be final.

“*Authorized Officer*” means the President of the Commission, the Vice-President of the Commission, the Executive Director of the Issuer, the Chief Financial Officer of the Issuer, the Treasurer of the Issuer, the Secretary of the Issuer and any other person or persons designated by the Commission by resolution to act on behalf of the Issuer under this Indenture. The designation of such person or persons shall be evidenced by a Written Certificate of the Issuer delivered to a Responsible Officer of the Trustee containing the specimen signature of such person or persons and signed on behalf of the Issuer by its Executive Director or Chief Financial Officer. Such designation as an Authorized Officer shall remain in effect until a Responsible Officer of the

Trustee receives actual written notice from the Issuer to the contrary, accompanied by a new certificate.

“*Beneficial Owner*” means, with respect to Bonds registered in the Book-Entry System, any Person who acquires a beneficial ownership interest in a Bond held by the Securities Depository, and the term “*Beneficial Ownership*” shall be interpreted accordingly.

“*Bond*” or “*Bonds*” means any of the Series 2024 Bonds and any Refunding Bonds authorized by Section 2.1.

“*Bond Counsel*” means counsel of nationally recognized standing in matters pertaining to the tax-exempt status of interest on obligations issued by states and their political subdivisions, duly admitted to the practice of law before the highest court of any state of the United States, and selected by the Issuer.

“*Bond Payment Date*” means each date on which (a) interest on the Bonds is due and payable or (b) principal of the Bonds is payable at maturity or pursuant to Sinking Fund Installments.

“*Bond Purchase Fund*” means the fund by that name established pursuant to Section 4.15(a), including the Remarketing Proceeds Account and the Issuer Purchase Account therein.

“*Bond Registrar*” means the Trustee and any other bank or trust company organized under the laws of any state of the United States of America or national banking association appointed by the Issuer to perform the duties of Bond Registrar under this Indenture.

“*Bondholder*” or “*Holder of Bonds*” or “*Holder*” or “*Owner*” means any Person who shall be the registered owner of any Bond or Bonds.

“*Book-Entry System*” means the system maintained by the Securities Depository and described in Section 3.9.

“*Business Day*” means any day other than (a) a Saturday or a Sunday, (b) a day on which commercial banks in New York, New York, or the city in which is located the designated corporate trust office of the Trustee, the Custodian or a Calculation Agent are authorized by law or executive order to close, (c) a day on which the New York Stock Exchange, Inc. is closed, (d) a day on which the payment system of the Federal Reserve System is not operational, and (e) for purposes of determining the SIFMA Index Rate and the SOFR Index Rate, any day that SIFMA recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in United States government securities. With respect to any action required to be taken by the Issuer hereunder, the term “*Business Day*” shall exclude any date on which the operational offices of the Issuer are authorized by law or executive order to close.

“*Calculation Agent*” means, with respect to any Series of Bonds bearing interest at an Index Rate, the Calculation Agent with respect to such Bonds appointed by the Issuer in writing to the Trustee pursuant to the applicable Calculation Agent Agreement and the Indenture.

“*Calculation Agent Agreement*” means, with respect to any Series of Bonds bearing interest at an Index Rate, such agreement as is entered into by the applicable Calculation Agent and the Issuer with respect to such Bonds providing for the determination of the applicable Index Rate on each Index Rate Reset Date in accordance with Section 2.9 and Section 2.10.

“*Call Option Notice*” has the meaning set forth in Section 2.2(b) of the Receivables Purchase Exhibit.

“*Call Receivable*” has the meaning set forth in Section 1.1 of the Receivables Purchase Exhibit.

“*Call Receivables Offer*” has the meaning set forth in Section 2.2(a) of the Receivables Purchase Exhibit.

“*Cede*” means Cede & Co., the nominee of DTC, and any successor nominee of DTC with respect to the Bonds pursuant to Section 3.9.

“*Collateral Agency Agreement*” means the Collateral Agency Agreement dated as of the Initial Issue Date between the Issuer and the Collateral Agent, as originally executed or as it may from time to time be supplemented, modified or amended pursuant to the terms thereof and this Indenture, as applicable.

“*Collateral Agent*” means Computershare Trust Company, N.A., as collateral agent under the Collateral Agency Agreement, and any successor serving in such capacity pursuant to the terms of such Collateral Agency Agreement.

“*Commercial Paper Interest Rate Period*” means, with respect to a Series of Bonds, each period comprised of CP Interest Terms for the Bonds of such Series, during which CP Interest Term Rates are in effect for such Bonds.

“*Commission*” means the Commission of the Issuer, or if said Commission shall be abolished, the board, body, commission or agency succeeding to the principal functions thereof or to whom the power and duties granted or imposed by this Indenture shall be given by law.

“*Commodity*” means Gas or Electricity, as applicable.

“*Commodity Project*” means the Issuer’s purchase of Commodities pursuant to the Commodity Purchase Agreement and related contractual arrangements and agreements, and the purchase of any Commodities to replace Commodities not delivered as required pursuant to the Commodity Purchase Agreement.

“*Commodity Purchase Agreement*” means the Amended & Restated Prepaid Commodity Sales Agreement, dated as of _____, 2024, between the Issuer and the Commodity Supplier, as originally executed or as it may from time to time be supplemented, modified or amended pursuant to the terms thereof and this Indenture, as applicable.

“*Commodity Sale and Service Agreement*” means the Commodity Purchase, Sale and Service Agreement, dated as of _____, 2024, between J. Aron and the Commodity Supplier.

“*Commodity Remarketing Reserve Fund*” means the Commodity Remarketing Reserve Fund established in the Indenture.

“*Commodity Supplier*” means Aron Energy Prepay 3_ LLC, a Delaware limited liability company.

“*Commodity Supplier Commodity Swap*” means the ISDA Master Agreement, the Amended & Restated Schedule, the Credit Support Annex and the Amended & Restated Confirmation between the Commodity Supplier and the Commodity Swap Counterparty, or any replacement agreement entered into consistent with the terms of the Commodity Purchase Agreement, pursuant to which the Commodity Swap Counterparty will pay to the Commodity Supplier an index based floating price and the Commodity Supplier will pay to the Commodity Swap Counterparty, a fixed price in relation to the daily quantities of natural gas to be delivered under the Commodity Purchase Agreement.

“*Commodity Supplier Custodial Agreement*” means the Custodial Agreement dated as of the Initial Issue Date, among the Commodity Swap Counterparty, the Commodity Supplier, the Trustee and the Custodian.

“*Commodity Supplier Documents*” means (i) the Commodity Purchase Agreement, (ii) the Commodity Purchase, Sale and Service Agreement (as defined in the Commodity Purchase Agreement) and the related guaranty of The Goldman Sachs Group, Inc., (iii) the Funding Agreement, (iv) the SPE Master Custodial Agreement (as defined in the Commodity Purchase Agreement), (v) the Commodity Supplier LLCA, and (vi) the Commodity Supplier Commodity Swap.

“*Commodity Supplier LLCA*” means the Amended and Restated Limited Liability Company Agreement of the Commodity Supplier.

“*Commodity Supply Contract*” means (a) the Amended & Restated Commodity Supply Contract, dated as of _____, 2024, between the Issuer and SMUD, as amended from time to time in accordance with the terms thereof and this Indenture, and (b) any other contract for the sale by the Issuer of Commodities from or attributable to the Commodity Project entered into by a Person that becomes a Project Participant in accordance with the assignment and novation requirements set forth in Section [7.11(d)(iv)], in each case as originally executed or as it may from time to time be supplemented, modified or amended pursuant to the terms thereof and this Indenture, as applicable.

“*Commodity Swap Counterparty*” means, with respect to the Issuer Commodity Swap, Royal Bank of Canada, and its successors and assigns, including any counterparty to a replacement Issuer Commodity Swap that meets the requirements of Section 2.12(b).

“*Commodity Swap Payments*” means, as of each scheduled payment date specified in the Issuer Commodity Swap, the amounts, if any, payable to the Commodity Swap Counterparty by Issuer (including any amounts paid by the Custodian pursuant to Section 3(d) of the Issuer Custodial Agreement); provided that, upon an early termination of the Issuer Commodity Swap, Commodity Swap Payments shall not include any amounts other than Unpaid Amounts due to the Commodity Swap Counterparty.

“*Commodity Swap Receipts*” means, as of each scheduled payment date specified in the Issuer Commodity Swap, the amount, if any, payable to the Issuer by the Commodity Swap Counterparty (including any amounts paid to the Trustee pursuant to Section 3(d) of the Commodity Supplier Custodial Agreement). The term “*Commodity Swap Receipts*” does not include, and shall not be construed to include, any Seller Swap MTM Payment.

“*Commodity Swap Replacement Event*” has the meaning set forth in Section 2.12(c)(ii).

“*Commodity Swap Reserve Account*” means the Commodity Swap Reserve Account in the Project Fund established in Section 5.2.

“*Continuing Disclosure Undertaking*” means the Continuing Disclosure Undertaking entered into by the Issuer, as the same may be amended from time to time, with a Written Instrument of the Issuer delivered to the Trustee.

“*Conversion*” means (a) a conversion of a Series of Bonds from one Interest Rate Period to another Interest Rate Period, and (b) with respect to a Series of Bonds bearing interest at an Index Rate, the establishment of a new Index, a new Index Rate and/or a new Index Rate Period.

“*Conversion Date*” means the effective date of a Conversion of a Series of Bonds.

“*Cost of Acquisition*” means all costs of planning, financing, refinancing, acquiring, transporting, storing and implementing the Commodity Project, including:

- (a) the amount of the prepayment required to be made by the Issuer under the Commodity Purchase Agreement;
- (b) the amount for deposit into the Debt Service Account for capitalized interest on the Bonds, with such interest being calculated in accordance with the definition of “Debt Service”;
- (c) the amounts for deposit into the Debt Service Reserve Account and the Commodity Swap Reserve Account to meet the Debt Service Reserve Requirement and the Minimum Amount, respectively;
- (d) all other costs incurred in connection with and properly chargeable to, the acquisition or implementation of the Commodity Project;

(e) the costs and expenses incurred in the issuance and sale of the Bonds, including, without limitation, legal, financial advisory, accounting, engineering, consulting, financing, technical, fiscal agent and underwriting costs, fees and expenses, bond discount, rating agency fees, and all other costs and expenses incurred in connection with the authorization, sale and issuance of the Bonds and preparation of this Indenture; and

(f) with respect to any Series of Refunding Bonds, the amounts necessary to purchase, redeem and discharge the Bonds being refunded, including the payment of the Purchase Price or the Redemption Price of such Bonds, any necessary deposits to the Debt Service Account, the Debt Service Reserve Account and the Commodity Swap Reserve Account, and all other costs and expenses incurred in connection with such Series of Refunding Bonds, including the costs and expenses described in (d) and (e) above.

“*CP Interest Term*” means, with respect to a Commercial Paper Interest Rate Period for a Series of Bonds, each period established in accordance with Section 2.8 during which a CP Interest Term Rate is in effect for the Bonds of such Series.

“*CP Interest Term Rate*” means, with respect to a Commercial Paper Interest Rate Period for a Series of Bonds, an interest rate established periodically for each CP Interest Term in accordance with Section 2.8.

“*Custodial Agreements*” means, collectively, the Commodity Supplier Custodial Agreement and the Issuer Custodial Agreement.

“*Custodian*” means Computershare Trust Company, N.A., as custodian under each of the Custodial Agreements and its successors and assigns.

“*Daily Interest Rate*” means, with respect to a Series of Bonds, the final daily interest rate for such Bonds determined by the Remarketing Agent by 11:00 a.m. New York City time pursuant to Section 2.5.

“*Daily Interest Rate Period*” means, with respect to a Series of Bonds, each period during which a Daily Interest Rate is in effect for such Bonds.

“*Debt Service*” means with respect to any Outstanding Bonds, for any particular period of time, an amount equal to the sum of:

(a) all interest payable during such period on such Bonds, but excluding any interest that is to be paid from Bond proceeds on deposit in the Debt Service Account, plus

(b) the Principal Installments payable during such period on such Bonds, calculated on the assumption that, on the day of calculation, such Bonds cease to be Outstanding by reason of, but only by reason of, payment either upon maturity or application of any Sinking Fund Installments required by this Indenture;

provided that (i) the interest on any Bonds with a related Interest Rate Swap shall be calculated on the basis of the fixed interest rate payable by the Issuer under the Interest Rate Swap, and (ii) principal and interest due on the first day of a Fiscal Year shall be deemed to have been payable and paid on the last day of the immediately preceding Fiscal Year.

“Debt Service Account” means the Debt Service Account in the Debt Service Fund established in Section 5.2.

“Debt Service Fund” means the Debt Service Fund established in Section 5.2.

“Debt Service Reserve Account” means the Debt Service Reserve Account in the Debt Service Fund established in Section 5.2.

“Debt Service Reserve Requirement” means \$_____.

“Defaulted Interest” has the meaning given to such term in Section 3.8.

“Defeasance Securities” means (a) Government Obligations and (b) to the extent that such deposits or certificates of deposit are Qualified Investments, deposits in interest-bearing time deposits or certificates of deposit which shall not be subject to redemption or repayment prior to their maturity or due date other than at the option of the depositor or holder thereof or as to which an irrevocable notice of redemption or repayment, or irrevocable instructions have been given to call for redemption or repayment, of such time deposits or certificates of deposit on a specified redemption or repayment date has been given and such time deposits or certificates of deposit are not otherwise subject to redemption or repayment prior to such specified date other than at the option of the depositor or holder thereof, and which are fully secured by Government Obligations to the extent not insured by the Federal Deposit Insurance Corporation.

“Depository” means any bank, trust company, national banking association, savings and loan association, savings bank or other banking association selected by the Issuer as a depository of moneys and securities held under the provisions of this Indenture, and may include the Trustee.

“Dissemination Agent” means the dissemination agent, if any, appointed by the Issuer pursuant to the Continuing Disclosure Undertaking, and any successor Dissemination Agent appointed by the Issuer. The Issuer shall provide Written Notice to the Trustee of the identity of each Dissemination Agent.

“DTC” means The Depository Trust Company, New York, New York, and its successors and assigns.

“Early Termination Payment Date” has the meaning given to such term in Section 1.1 of the Commodity Purchase Agreement.

“Electricity” has the meaning given to such term in the Commodity Supply Contract.

“Electronic Means” means the following communication methods: e-mail, facsimile transmission, secure electronic transmission containing applicable authorization codes, passwords and/or authentication keys issued by the Trustee, or another method or system specified by a Responsible Officer of the Trustee as available for use in connection with its services hereunder.

“Electronic Signature” means a manually executed original signature that is then transmitted by Electronic Means.

“Electronically Signed” or *“Electronically Signed Document”* means a document containing, or to which there is affixed, an Electronic Signature.

“Eligible Bonds” means any Bonds other than Bonds which a Responsible Officer of the Trustee actually knows to be owned by, for the account of, or on behalf of the Issuer or the Project Participant.

“EMMA” means the Electronic Municipal Market Access system, the website currently maintained by the Municipal Securities Rulemaking Board and any successor municipal securities disclosure website approved by the Securities and Exchange Commission.

“Event of Default” has the meaning given to such term in Section 8.1.

“Extraordinary Expenses” means extraordinary and nonrecurring expenses. Any amounts, other than Unpaid Amounts, payable by the Issuer upon an early termination of the Issuer Commodity Swap shall constitute an Extraordinary Expense.

“Failed Remarketing” means the failure (i) of the Trustee to receive the Purchase Price of any Bond required to be purchased on a Mandatory Purchase Date by noon New York City time on the fifth Business Day preceding such Mandatory Purchase Date or (ii) to purchase or redeem such Bond in whole by such Mandatory Purchase Date (including from any funds on deposit in the Assignment Payment Fund and required to be used for such redemption).

“Favorable Opinion of Bond Counsel” means an Opinion of Bond Counsel to the effect that an action proposed to be taken is not prohibited by this Indenture and will not adversely affect the tax-exempt status of interest on applicable Bonds.

“Fiduciary” or *“Fiduciaries”* means the Trustee, the Paying Agents, the Bond Registrar, the Custodian, the Calculation Agent or any or all of them, as may be appropriate.

“Final Fixed Rate Conversion Date” means, with respect to a Series of Bonds, the date on which such Bonds begin to bear interest for a Fixed Rate Period which extends to the Final Maturity Date for such Series of Bonds.

“Final Maturity Date” means (a) with respect to the Series 2024 Bonds, _____ 1, 205_, and (b) with respect to any other Series of Bonds, the final Maturity Date set forth in the related Supplemental Indenture.

“*Fiscal Year*” means (a) the twelve-month period beginning on _____ 1 of each year and ending on the next September 30, or (b) such other twelve-month period established by the Issuer from time to time, upon Written Notice to the Trustee, as its fiscal year.

“*Fitch*” means Fitch Ratings, Inc., its successors and assigns, and, if such corporation shall no longer perform the functions of a securities rating agency, “*Fitch*” shall be deemed to refer to any other nationally recognized securities rating agency designated by the Issuer, in a Written Instrument of the Issuer delivered to the Trustee.

“*Fixed Rate*” means, with respect to a Series of Bonds, a fixed interest rate for each maturity of such Bonds established in accordance with Section 2.7.

“*Fixed Rate Bonds*” means the Series 2024 Bonds and any other series of Bonds bearing interest at a Fixed Rate.

“*Fixed Rate Conversion Date*” means, with respect to a Series of Bonds, the date on which such Bonds begin to bear interest at a Fixed Rate pursuant to the provisions of Section 2.7, which term shall include the Final Fixed Rate Conversion Date with respect to such Bonds.

“*Fixed Rate Period*” means, with respect to a Series of Bonds, each period during which a Fixed Rate is in effect for such Bonds.

“*Fixed Rate Tender Date*” means (a) with respect to the initial Fixed Rate Period for the Series 2024 Bonds maturing on the Final Maturity Date, the Series 2024 Mandatory Purchase Date, and (b) with respect to any other Fixed Rate Period for a Series of Bonds, the date so specified in the related Supplemental Indenture or notice of Conversion to or continuation of such Fixed Rate Period provided by the Issuer pursuant to Section 2.7(b), as applicable, which date shall be a Mandatory Purchase Date pursuant to Section 4.13 and shall not be later than the Final Maturity Date. The Fixed Rate Tender Date shall always be a Business Day, unless such date is the Final Maturity Date. If a date (other than the Final Maturity Date) that is not a Business Day is specified as a Fixed Rate Tender Date, then the Fixed Rate Tender Date shall be the Business Day immediately following such specified date.

“*Fund*” or “*Funds*” means, as the case may be, each or all of the Funds established in Section 5.2 and Section 4.15.

“*Funding Agreement*” has the meaning given to such term in the Commodity Purchase Agreement.

“*Funding Recipient*” has the meaning given to such term in the Commodity Purchase Agreement.

“*Gas*” has the meaning given to such term in the Commodity Supply Contract.

“*General Fund*” means the General Fund established in Section 5.2.

“Government Obligations” means:

(a) Direct obligations of (including obligations issued or held in book-entry form on the books of) the Department of the Treasury of the United States of America, obligations unconditionally guaranteed as to principal and interest by the United States of America, and evidences of ownership interests in such direct or unconditionally guaranteed obligations;

(b) Any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state which: (i) are not callable at the option of the obligor prior to maturity or as to which irrevocable notice has been given by the obligor to call such bonds or obligations on the date specified in the notice; (ii) are rated in the two highest Rating Categories of S&P and Moody’s; and (iii) are fully secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or obligations described in clause (a) above, which fund may be applied only to the payment of interest when due, principal of and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable notice, as appropriate; or

(c) Any other bonds, notes or obligations of the United States of America or any agency or instrumentality thereof which, if deposited with the Trustee for the purpose described in Section 12.1(c), will result in a rating on the Bonds which are deemed to have been paid pursuant to Section 12.1(c) that is in the same Rating Category of the obligations listed in subsection (a) above.

The Trustee shall have no responsibility whatsoever for monitoring ratings or determining whether any bond, note or other obligation is or continues to be a Government Obligation.

“Increased Interest Rate” means (a) during the Initial Interest Rate Period with respect to each maturity of the Series 2024 Bonds, 8.00% per annum, and (b) during any subsequent Interest Rate Period, the rate (if any) set forth in a Supplemental Indenture or Written Direction of the Issuer to the Trustee with respect to such Interest Rate Period.

“Increased Interest Rate Period” means the period from and including the date on which a Ledger Event occurs to but not including the earliest of (a) the date on which a Termination Payment Event occurs, (b) the Series 2024 Mandatory Purchase Date or any prior redemption date and (c) the Interest Payment Date immediately succeeding the last date on which the Commodity Supplier paid the amounts required by Section 17.2 of the Commodity Purchase Agreement.

“Indenture” means this Amended and Restated Trust Indenture as from time to time amended or supplemented by Supplemental Indentures in accordance with the terms hereof.

“Index” means the SIFMA Index or the SOFR Index, as applicable.

“Index Rate” means a SIFMA Index Rate or a SOFR Index Rate, as applicable.

“*Index Rate Continuation Notice*” means a written notice delivered by the Issuer pursuant to Section 2.9(c)(i) in the form of Exhibit C hereto.

“*Index Rate Determination Certificate*” means a written notice delivered by the Issuer pursuant to Section 2.9(b)(i) in the form of Exhibit B hereto.

“*Index Rate Period*” means, with respect to a Series of Bonds, an Interest Rate Period during which the Bonds of such Series bear interest at an Index Rate.

“*Index Rate Reset Date*” means, with respect to a Series of Bonds bearing interest at an Index Rate, each date on which the applicable Index Rate is determined by the Calculation Agent based on the change in the applicable Index as of such date, which shall be the date or dates so specified in the applicable Index Rate Determination Certificate or Index Rate Continuation Notice with respect to such Index Rate Period (including, by way of example and not limitation, each Business Day, Thursday of each week, the first Business Day of each calendar month, the first Business Day of a calendar quarter or each SOFR Effective Date).

“*Index Rate Tender Date*” means, with respect to any Index Rate Period for a Series of Bonds, the date so specified in the applicable Index Rate Determination Certificate or Index Rate Continuation Notice with respect to such Index Rate, which date shall be a Mandatory Purchase Date pursuant to Section 4.13 and shall not be later than the Final Maturity Date. The Index Rate Tender Date shall always be a Business Day, unless such date is the Final Maturity Date. If a date (other than the Final Maturity Date) that is not a Business Day is specified as an Index Rate Tender Date, then the Index Rate Tender Date shall be the Business Day immediately following such specified date.

“*Initial Interest Rate Period*” means, with respect to the Series 2024 Bonds, the period from the Initial Issue Date to and including March 30, 2032; provided that in the event that the Series 2024 Bonds are redeemed (or purchased in lieu of redemption) pursuant to Section 4.1 and Section 4.3, the Initial Interest Rate Period shall end on and as of the day of such redemption or purchase.

“*Initial Issue Date*” means the date of initial issuance and delivery of the Series 2024 Bonds.

“*Interest Payment Date*” means, except as otherwise provided by the Supplemental Indenture for such Bond, with respect to any Bond (a) during any Daily Interest Rate Period or Weekly Interest Rate Period for such Bond, the first Business Day of each Month, (b) during any Index Rate Period for such Bond, the first Business Day of each Month, except as otherwise provided by the Supplemental Indenture for such Bond, (c) (i) during the initial Fixed Rate Period for such Bond, each _____ 1 and _____ 1 and (ii) during any subsequent Fixed Rate Period, each _____ 1 and _____ 1 or such other dates as may be determined by the Issuer and set forth in a Written Notice delivered to the Trustee pursuant to Section 2.7, provided that the first Interest Payment Date for any Fixed Rate Period shall be at least 90 days from the first day of such period, (d) during any Commercial Paper Interest Rate Period for such Bond, the

day next succeeding the last day of each CP Interest Term, (e) any redemption date for such Bond, (f) any Mandatory Purchase Date for such Bond, and (g) the Maturity Date of such Bond.

“Interest Rate Period” means a Daily Interest Rate Period, a Weekly Interest Rate Period, a Commercial Paper Interest Rate Period, a Fixed Rate Period or an Index Rate Period. Notwithstanding anything contained herein to the contrary, all Bonds of a Series shall at all times bear interest for the same Interest Rate Period.

“Interest Rate Swap” means (a) the ISDA Master Agreement, Schedule and each Confirmation thereunder between the Issuer and the Interest Rate Swap Counterparty, if any, pursuant to which the Issuer agrees to make payments to the Interest Rate Swap Counterparty at a fixed rate of interest and the Interest Rate Swap Counterparty agrees to make payments to the Issuer at a floating rate equal to the rate of interest borne by a related Series of Bonds, in each case with a notional amount equal to the Outstanding principal amount of such Series of Bonds, and (b) any replacement interest rate swap agreement permitted by Section 2.13(b); *provided that*, as long as no Interest Rate Swap has been entered into by the Issuer, all references herein to the Interest Rate Swap, Interest Rate Swap Counterparty, Interest Rate Swap Receipts and Interest Rate Swap Payments (including, without limitation, Section 7.15) shall be disregarded.

“Interest Rate Swap Counterparty” means the counterparty to any Interest Rate Swap; provided that (a) the Interest Rate Swap Counterparty (or its credit support provider under the Interest Rate Swap) must be rated not lower than (i) the Minimum Rating, or (ii) at least as highly as the rating then assigned by each Rating Agency to the Bonds; and (b) for a replacement Interest Rate Swap, any alternative Interest Rate Swap Counterparty must satisfy the requirements of Section 2.13(b).

“Interest Rate Swap Payments” means, as of each scheduled payment date specified in the Interest Rate Swap, the amount, if any, payable to the Interest Rate Swap Counterparty by the Issuer.

“Interest Rate Swap Receipts” means, as of each scheduled payment date specified in the Interest Rate Swap, the amount, if any, payable to the Issuer by the Interest Rate Swap Counterparty.

“Internal Revenue Code” means the Internal Revenue Code of 1986, as amended. References herein to sections of the Internal Revenue Code include the applicable U.S. Treasury Regulations promulgated thereunder.

“Investment Agreement Breakage Account” means the Investment Agreement Breakage Account established in Section 5.2.

“Investment Agreement Breakage Amount” means the amount payable to or receivable by the Issuer in respect of breakage costs due upon an early termination of any Specified Investment Agreement as a result of the occurrence of an Early Termination Payment Date under the Commodity Purchase Agreement. Any Investment Agreement Breakage Amount payable by the

Issuer is not an item of Operating Expenses and shall be payable solely from any amounts on deposit in the Investment Agreement Breakage Account.

“Issue Date” means (a) with respect to the Series 2024 Bonds, the Initial Issue Date, and (b) with respect to any other Series of Bonds, the date of initial issuance and delivery of such Series.

“Issuer” means Northern California Energy Authority, a joint powers authority and public entity of the State of California.

“Issuer Commodity Swap” means the ISDA Master Agreement, the Amended & Restated Schedule and the Amended & Restated Confirmation between the Issuer and the Commodity Swap Counterparty, or any replacement agreement permitted by Section 2.12(b), pursuant to which the Issuer will pay to the Commodity Swap Counterparty an index-based floating price and the Commodity Swap Counterparty will pay to the Issuer a fixed price in relation to the daily quantities of natural gas to be delivered under the Commodity Purchase Agreement.

“Issuer Custodial Agreement” means the Custodial Agreement, dated as of the Initial Issue Date among the Issuer, the Trustee, the Custodian and the Commodity Swap Counterparty.

“Issuer Purchase Account” means the Account by that name in the Bond Purchase Fund.

“J. Aron” means J. Aron & Company LLC, a New York limited liability company.

“J. Aron Acceleration Option” means the exercise by J. Aron of its right under the Commodity Sale and Service Agreement to pay the Termination Payment to the Commodity Supplier following the occurrence of a Ledger Event, which shall be subject to the Commodity Supplier’s prior consent thereto as provided in the Commodity Sale and Service Agreement.

“Ledger Event” has the meaning given to such term in the Commodity Purchase Agreement.

“Ledger Event Payments” means the payments required to be made by the Commodity Supplier following the occurrence of a Ledger Event pursuant to Section [17.2] of the Commodity Purchase Agreement with respect to the additional amounts of interest due on the Bonds at the Increased Interest Rate, which payments shall be deposited directly into the Debt Service Account.

“Liquidity Facility” means, with respect to a Series of Bonds, a standby bond purchase agreement, letter of credit or similar facility providing liquidity support for such Series of Bonds and any Alternate Liquidity Facility provided in substitution of the foregoing.

“Liquidity Facility Provider” means, with respect to a Liquidity Facility for a Series of Bonds, the commercial bank or other financial institution providing the same and any other commercial bank or other financial institution issuing or providing (or having primary obligation for, or acting as agent for the financial institutions obligated under) an Alternate Liquidity Facility.

“*Mandatory Purchase Date*” means any date on which Bonds are required to be purchased pursuant to Section 4.12, Section 4.13 or Section 4.14, respectively.

“*Maturity Date*” means, with respect to a Series of Bonds, each date upon which principal of such Bonds is due, as set forth in (a) Section 2.2(b) with respect to the Series 2024 Bonds, and (b) the related Supplemental Indenture with respect to any other Series of Bonds.

“*Maximum Lawful Rate*” means the maximum interest rate permitted by applicable law.

“*Maximum Rate*” means the lesser of twelve percent (12%) per annum and the Maximum Lawful Rate.

“*Minimum Amount*” means the amount of \$ _____ to be maintained on deposit in the Commodity Swap Reserve Account, subject to application as provided in Section 5.3(b).

“*Minimum Daily Interest Rate*” means, with respect to a Series of Bonds bearing interest at a Daily Rate, the minimum rate determined by the Remarketing Agent by 10:00 a.m. New York City time pursuant to Section 2.5.

“*Minimum Rating*” means the credit rating equal to at least “A1” from Moody’s.

“*Month*” means a calendar month.

“*Moody’s*” means Moody’s Investors Service, Inc., its successors and assigns, and, if such corporation shall no longer perform the functions of a securities rating agency, “*Moody’s*” shall be deemed to refer to any other nationally recognized securities rating agency designated by the Issuer in a Written Instrument of the Issuer delivered to the Trustee.

“*NY Federal Reserve’s Website*” means the website of the Federal Reserve Bank of New York currently at <http://newyorkfed.org>, or any successor website of the Federal Reserve Bank of New York.

“*Operating Expenses*” means, to the extent properly allocable to the Commodity Project, (a) the Issuer’s expenses for operation of the Commodity Project, including all Rebate Payments; Commodity Swap Payments; costs, collateral deposits and other amounts (other than Commodity Swap Payments) necessary to maintain any Issuer Commodity Swap; and payments required under the Commodity Purchase Agreement (which may, under certain circumstances, include imbalance charges and other miscellaneous payments) or required to be incurred under or in connection with the performance of the Issuer’s obligations under the Commodity Supply Contract; (b) any other current expenses or obligations required to be paid by the Issuer under the provisions of this Indenture (other than Debt Service on the Bonds) or by law or required to be incurred under or in connection with the performance of the Issuer’s obligations under the Commodity Supply Contract; *provided that* Operating Expenses shall not include any amounts owed by the Issuer under the Commodity Supply Contract with respect to purchases of replacement commodities by the Project Participant; (c) fees payable by the Issuer with respect to any Remarketing Agreement; (d) the fees and expenses of the Fiduciaries; (e) reasonable accounting, legal and other professional

fees and expenses incurred by the Issuer, including but not limited to those relating to the administration of the Trust Estate and compliance by the Issuer with its continuing disclosure obligations, if any, with respect to the Bonds; (f) the costs of any insurance premiums incurred by the Issuer, including, without limitation, directors and officers liability insurance; and (g) fees of rating agencies necessary to maintain ratings on the Bonds. Litigation judgments and settlements and indemnification payments in connection with the payment of any litigation judgment or settlement and Extraordinary Expenses are not Operating Expenses.

“Operating Fund” means the Operating Fund established in Section 5.2.

“Opinion of Bond Counsel” means a written opinion of either Bond Counsel or Special Tax Counsel (or written opinions of both of them) addressed to the Issuer and delivered to the Trustee.

“Opinion of Counsel” means an opinion signed by an attorney or firm of attorneys (who may be counsel to the Issuer) selected by the Issuer.

“Optional Purchase Date” means any date on which Bonds are to be purchased pursuant to Section 4.11.

“Outstanding” when used with reference to Bonds, means as of any date, Bonds theretofore or thereupon being authenticated and delivered under this Indenture except:

(a) Bonds cancelled (or portions thereof deemed to have been cancelled) by the Trustee at or prior to such date;

(b) Bonds (or portions of Bonds) for the payment or redemption of which moneys, equal to the principal amount or Redemption Price thereof, as the case may be, with interest to the date of maturity or redemption date, shall be held in trust under this Indenture and set aside for such payment or redemption (whether at or prior to the maturity or redemption date), provided that if such Bonds (or portions of Bonds) are to be redeemed, notice of such redemption shall have been given or provision satisfactory to the Trustee shall have been made for the giving of such notice as provided in Article IV;

(c) Bonds in lieu of or in substitution for which other Bonds shall have been authenticated and delivered pursuant to Article III or Section 4.6 or Section 11.6;

(d) Bonds deemed to have been paid as provided in Section 12.1(b); and

(e) Bonds (or portions thereof) deemed to have been purchased pursuant to the provisions of any Supplemental Indenture in lieu of which other Bonds have been authenticated and delivered as provided in such Supplemental Indenture.

“Participants” means those broker-dealers, banks and other financial institutions from time to time for which DTC holds Bonds as Securities Depository.

“*Paying Agent*” means the Trustee, its successors and assigns, and any other bank or trust company organized under the laws of any state of the United States of America or any national banking association designated as paying agent for the Bonds, and its successor or successors hereafter appointed in the manner provided in this Indenture.

“*Person*” means any and all natural persons, firms, associations, corporations and public bodies.

“*Pledged Funds*” means (a) the Project Fund, (b) the Revenue Fund, (c) the Debt Service Fund, (d) the General Fund, (e) the Assignment Payment Fund, in each case including the Accounts in each of such Funds, and (f) the Commodity Swap Reserve Account, but subject to the prior pledge thereof in favor of the Commodity Swap Counterparty.

“*Prevailing Market Conditions*” means, without limitation, the following factors: existing short-term market rates for securities, the interest on which is excluded from gross income for federal income tax purposes; indexes of such short-term rates; the existing market supply and demand and the existing yield curves for short-term and long-term securities for obligations of credit quality comparable to the Bonds, the interest on which is excluded from gross income for federal income tax purposes; general economic conditions and financial conditions that may affect or be relevant to the Bonds; and such other facts, circumstances and conditions as the Remarketing Agent, in its sole discretion, shall determine to be relevant to the remarketing of the Bonds at the Purchase Price thereof.

“*Principal Installment*” means, as of any date of calculation, (a) the principal amount of Bonds due on a certain future date for which no Sinking Fund Installments have been established, or (b) the unsatisfied balance (determined as provided in Section 5.11(c)) of any Sinking Fund Installments due on a certain future date in a principal amount equal to said unsatisfied balance of such Sinking Fund Installments.

“*Project Fund*” means the Project Fund established in Section 5.2.

“*Project Participant*” means (a) the Person that is a purchaser under the Commodity Supply Contract and identified as the “*Initial Project Participant*” in Schedule I and (b) any other Person that enters into a Commodity Supply Contract with the Issuer in accordance with the assignment and novation requirements set forth in Section 7.11(d)(iv).

“*Purchase Date*” means an Optional Purchase Date or a Mandatory Purchase Date, as the case may be.

“*Purchase Price*” means (a) with respect to any Purchased Bond to be purchased on an Optional Purchase Date, an amount equal to the principal amount of such Bond Outstanding on such date plus accrued and unpaid interest thereon unless such Optional Purchase Date is an Interest Payment Date for such Bond, in which case interest on such Bond shall not be included in the Purchase Price of such Bond but shall be paid to the Owner of such Bond in accordance with the interest payment provisions thereof, (b) except as provided in clause (c) below, with respect to any Purchased Bond to be purchased on a Mandatory Purchase Date, an amount equal to the

principal amount of such Bond Outstanding on such date, and (c) in the case of a purchase of a Bond bearing interest at a Fixed Rate pursuant to Section 4.14 with respect to which the new Interest Rate Period commences prior to the day originally established as the last day of the preceding Fixed Rate Period, the optional redemption price for such Bond set forth in Section 4.3(b) or an applicable Supplemental Indenture which would have been applicable to such Bond if the preceding Fixed Rate Period had continued to the day originally established as its last day. Accrued interest due on any Bonds to be purchased on a Mandatory Purchase Date shall be paid from amounts on deposit in the Debt Service Account of the Debt Service Fund on such date in accordance with Section 5.7.

“Purchased Bonds” means any Bonds required to be purchased on a Purchase Date.

“Put Receivable” has the meaning set forth in Section 1.1 of the Receivables Purchase Exhibit.

“Put Receivables Account” means the account by that name established under the SPE Master Custodial Agreement.

“Qualified Investments” means any of the following investments, if and to the extent that the same are rated (or whose financial obligations to the Issuer receive credit support from an entity rated) at (i) the Minimum Rating or (ii) such a rating that will allow the Bonds to be rated the same as the credit rating or financial strength rating assigned to the Funding Recipient (except for (c) below), and are at the time of investment legal investments of the Issuer’s funds:

- (a) Direct obligations of the United States government or any of its agencies;
- (b) Obligations guaranteed as to principal and interest by the United States government or any of its agencies;
- (c) Certificates of deposit and other evidences of deposit at state and federally chartered banks, savings and loan institutions or savings banks, including the Trustee and its affiliates (each having the highest short-term rating by each Rating Agency then rating the Bonds) deposited and collateralized as required by law;
- (d) Repurchase agreements entered into with the United States or its agencies or with any bank, broker-dealer or other such entity, including the Trustee and its affiliates, so long as the obligation of the obligated party is secured by a perfected pledge of obligations, that meet the conditions set forth in the preamble to this definition;
- (e) Guaranteed investment contracts, forward delivery agreements or similar agreements providing for a specified rate of return over a specified time period; provided, however, that guaranteed investment contracts, forward delivery agreements or similar agreements shall meet the conditions set forth in the preamble to this definition if they do so at the time of investment;

(f) Direct general obligations of a state of the United States, or a political subdivision or instrumentality thereof, having general taxing powers;

(g) Obligations of any state of the United States or a political subdivision or instrumentality thereof, secured solely by revenues received by or on behalf of the state or political subdivision or instrumentality thereof irrevocably pledged to the payment of principal of and interest on such obligations;

(h) Money market funds registered under the federal Investment Company Act of 1940, whose shares are registered under the federal Securities Act of 1933, and having a rating in the highest Rating Category by each Rating Agency, including money market funds of the Trustee or its affiliates or funds for which the Trustee or its affiliates (i) provide investment or other management services and (ii) serve as investment manager, administrator, shareholder, servicing agent and/or custodian or subcustodian, notwithstanding that (A) the Trustee or its affiliate receives or collects fees from such funds for services rendered, and (B) services performed by the Trustee pursuant to this Indenture may at times duplicate those provided to such funds by the Trustee or its affiliate; or

(i) Any other investments permitted by applicable law for the investment of the funds of the Issuer;

provided that, the Trustee shall have no responsibility whatsoever for monitoring ratings or determining whether any investment made is or continues to be a Qualified Investment.

“*Rating Agency*” means Fitch, Moody’s or S&P, or any other rating agency so designated in a Supplemental Indenture that, at the time, rates the Bonds.

“*Rating Category*” means one or more of the generic rating categories of a Rating Agency, without regard to any refinement or gradation of such rating category or categories by a numerical modifier or otherwise.

“*Rating Confirmation*” means written evidence satisfactory to the Issuer, so designated in writing to the Trustee that upon the effectiveness of any proposed action, all Outstanding Bonds will continue to be assigned at least the same or equivalent ratings (including the same or equivalent numerical or other modifiers within a Rating Category) by each Rating Agency then rating such Outstanding Bonds.

“*Rebate Payments*” means those portions of moneys or securities held in any Fund or Account that are required to be paid to the United States Treasury Department under the requirements of Section 148(f) of the Internal Revenue Code.

“*Receivables Purchase Exhibit*” or “*Receivables Purchase Provisions*” means the provisions set forth in Exhibit E to the Commodity Purchase Agreement.

“*Redemption Account*” means the Redemption Account in the Debt Service Fund established in Section 5.2.

“*Redemption Price*” means, with respect to any Bond, the amount payable upon redemption thereof pursuant to such Bond or this Indenture.

“*Refunding Bonds*” means a Series of Bonds authorized to be issued pursuant to Section 2.1(c) for the sole purposes of refunding or defeasing (in accordance with Article XII) in whole a Series of Bonds then Outstanding, and paying the Cost of Acquisition with respect to such Refunding Bonds.

“*Regular Record Date*” has the meaning given to such term in Section 3.8.

“*Remarketing Agent*” means, with respect to any Series of Bonds, the entity appointed as the remarketing agent for such Series pursuant to the related Remarketing Agreement and, if applicable, the related Supplemental Indenture.

“*Remarketing Agreement*” means, with respect to any Series of Bonds, the remarketing agreement, if any, entered into between the Issuer and the Remarketing Agent for such Series of Bonds.

“*Remarketing Proceeds Account*” means the Account by that name within the Bond Purchase Fund.

“*Remediation Remarketing Purchase Price*” has the meaning given to such term in the Commodity Remarketing Exhibit to the Commodity Purchase Agreement.

“*Re-Pricing Agreement*” means the Re-Pricing Agreement dated as of the Initial Issue Date between the Issuer and the Commodity Supplier, as the same may be amended in accordance with its terms.

“*Responsible Officer*” means, when used with respect to the Trustee, the Custodian or the Calculation Agent, as applicable, any managing director, president, vice president, senior associate, associate or other officer of the Trustee, the Custodian or the Calculation Agent, respectively, within the corporate trust office specified in Section 12.10 (or any successor corporate trust office of the Trustee, the Custodian or the Calculation Agent, respectively) customarily performing functions similar to those performed by such individuals who at the time are such officers, respectively, or to whom any corporate trust matter is referred at the corporate trust office specified in Section 12.10 because of such person’s knowledge of and familiarity with the particular subject of this Indenture and who in each case shall have direct responsibility for the administration of this Indenture.

“*Revenue Fund*” means the Revenue Fund established in Section 5.2.

“*Revenues*” means:

(a) all revenues, income, rents, user fees or charges, and receipts derived or to be derived by the Issuer from or attributable or relating to the ownership and operation of the Commodity Project, including all revenues attributable or relating to the Commodity

Project or to the payment of the costs thereof received or to be received by the Issuer under the Commodity Supply Contract and the Commodity Purchase Agreement or otherwise payable to the Trustee for the account of the Issuer for the sale and/or transportation of natural gas or electricity or otherwise with respect to the Commodity Project;

(b) interest received or to be received on any moneys or securities (other than moneys or securities held in the Acquisition Account, moneys or securities held in the Redemption Account in the Debt Service Fund or that portion of moneys in the Operating Fund required for Rebate Payments) held pursuant to this Indenture and paid or required to be paid into the Revenue Fund; and

(c) any Commodity Swap Receipts received by the Trustee, on behalf of the Issuer.

provided that, the term “Revenues” shall not include: (s) any Termination Payment or, if applicable, Additional Termination Payment paid pursuant to the Commodity Purchase Agreement; (t) any amounts received from the Commodity Supplier that are required to be deposited into the Commodity Remarketing Reserve Fund pursuant to Section 5.12; (u) Ledger Event Payments received from the Commodity Supplier pursuant to Section [17.2] of the Commodity Purchase Agreement; (v) any Assignment Payment received from the Commodity Supplier; (w) Interest Rate Swap Receipts; (x) payments received from the Commodity Supplier pursuant to the Receivables Purchase Exhibit; (y) any Investment Agreement Breakage Amount payable to the Issuer; and (z) any Seller Swap MTM Payment payable to the Issuer.

“S&P” means S&P Global Ratings, a division of S&P Global Inc., its successors and assigns, and, if such entity shall no longer perform the functions of a securities rating agency, “S&P” shall be deemed to refer to any other nationally recognized securities rating agency designated by the Issuer, in a Written Instrument of the Issuer delivered to the Trustee.

“Scheduled Debt Service Deposits” means the required monthly deposits to the Debt Service Account in the Debt Service Fund and the required cumulative deposits to the Debt Service Account in the Debt Service Fund in respect of the Debt Service coming due on the Bonds on each Bond Payment Date pursuant to Section 5.5(a)(ii) and as set forth on Schedule II hereto. Scheduled Debt Service Deposits shall not be increased in the event that the Series 2024 Bonds bear interest at the Increased Interest Rate. Schedule II shall be revised (a) by Written Notice of the Issuer delivered at the time of its designation of each subsequent Interest Rate Period, and (b) by each Supplemental Indenture authorizing the issuance of Refunding Bonds.

“Securities Depository” means DTC, or its nominee, and its successors and assigns.

“Seller Swap MTM Payment” has the meaning assigned to such term in Section 17.6 of the Commodity Purchase Agreement.

“Series” mean the Series 2024 Bonds and any other Bonds designated as a Series authorized to be issued hereunder pursuant to Section 2.1.

“*Series 2024 Bonds*” means, Commodity Supply Revenue Refunding Bonds, Series 2024, which shall bear interest at a [Fixed Rate] during the Initial Interest Rate Period and authorized to be issued under Section 2.1(a).

“*Series 2024 Mandatory Purchase Date*” means _____ 1, 203_, which is the day following the last day of the Initial Interest Rate Period for the Series 2024 Bonds.

“*SIFMA Index*” means the SIFMA Municipal Swap Index, which, for purposes of an Index Rate Reset Date for a Series of Bonds bearing interest at a SIFMA Index Rate, will be the level of such index which is issued weekly and which is compiled from the weekly interest rate resets of tax exempt variable rate issues included in a database maintained by Municipal Market Analytics which meet specific criteria established from time to time by SIFMA and issued on Wednesday of each week, or if any Wednesday is not a Business Day, the immediately succeeding Business Day. If the SIFMA Index is not available as of any Index Rate Reset Date, the rate for such Index Rate Reset Date will be determined using a comparable substitute or replacement index for such Index Rate Reset Date selected and designated by the Issuer in compliance with Section 2.9(b)(v).

“*SIFMA Index Rate*” means a per annum rate of interest equal to the sum of (a) the SIFMA Index then in effect, plus (b) the Applicable Spread.

“*SIFMA Index Rate Period*” means, with respect to a Series of Bonds, an Index Rate Period during which such Bonds bear interest at the SIFMA Index Rate.

“*Sinking Fund Installment*” means, for the Series 2024 Bonds, the amount so designated in Section 4.2, and with respect to any other Series of Bonds, each date, if any, on which such Bonds are subject to mandatory sinking fund redemption as set forth in the applicable Supplemental Indenture.

“*SMUD*” means the Sacramento Municipal Utility District.

“*SOFR Accrual Period*” means (a) the number of actual days from and including the Initial Issue Date to but not including the first SOFR Interest Calculation Date and (b) thereafter, the number of actual days from and including the preceding SOFR Interest Calculation Date to but not including the next succeeding SOFR Interest Calculation Date, regardless of the number of days in any Month.

“*SOFR Effective Date*” shall mean each Business Day. Each SOFR Effective Date is an Index Rate Reset Date for all purposes of the Indenture unless the context clearly requires otherwise.

“*SOFR Effective Period*” means the number of actual days from a SOFR Effective Date to the next SOFR Effective Date.

“*SOFR Index*” means the Secured Overnight Financing Rate reported on the NY Federal Reserve’s Website, or reported by any successor to the Federal Reserve Bank of New York as administrator of such Secured Overnight Financing Rate, as of 3:00 p.m. on each SOFR Publish

Date representing the SOFR Index as of the SOFR Lookback Date, which will be used to calculate interest for the SOFR Effective Period beginning on the SOFR Effective Date. If the SOFR Index is not available as of any Index Rate Reset Date, the interest rate for such Index Rate Reset Date will be determined using a comparable substitute or replacement index for such Index Rate Reset Date designated by the Issuer in writing (with notice to, and which is available to, the Calculation Agent) in compliance with Section 2.9(b)(vii).

“*SOFR Index Rate*” means a daily variable interest rate equal to the sum of (a) the product of the SOFR Index and the Applicable Factor, plus (b) the Applicable Spread on each day of a SOFR Effective Period, not to exceed the Maximum Rate.

“*SOFR Index Rate Period*” means, with respect to a Series of Bonds, an Index Rate Period during which such Bonds bear interest at the SOFR Index Rate.

“*SOFR Interest Calculation Date*” means the first Business Day of each month.

“*SOFR Lookback Date*” means the third Business Day immediately preceding each SOFR Effective Date.

“*SOFR Publish Date*” means the second Business Day immediately preceding each SOFR Effective Date.

“*SPE Custodian*” has the meaning given to such term in the SPE Master Custodial Agreement.

“*SPE Master Custodial Agreement*” has the meaning given to such term in the Commodity Purchase Agreement.

“*Special Record Date*” has the meaning given to such term in Section 3.8.

“*Special Tax Counsel*” means counsel of nationally recognized standing in matters pertaining to the tax-exempt status of interest on obligations issued by states and their political subdivisions, duly admitted to the practice of law before the highest court of any state of the United States, and selected by the Issuer. Bond Counsel may serve as Special Tax Counsel.

“*Specified Investment Agreement*” has the meaning given to such term in Section 1.1 of the Commodity Purchase Agreement.

Any “*State*” means the State of California.

“*Supplemental Indenture*” means any indenture supplemental to or amendatory of this Indenture executed and delivered by the Issuer and the Trustee in accordance with Article X.

“*Swap Payment Deficiency*” means, as of any date, (a) the amount of the next Commodity Swap Payment expected to become due, minus (b) the amount of any funds deposited in the Operating Fund and not otherwise allocable to Rebate Payments pursuant to Section 5.6(a)(i),

minus (c) the Commodity Swap Reserve Account balance; provided, however, that if such difference is a negative number, then the Swap Payment Deficiency shall be zero.

“*Swap Termination Account*” means the Swap Termination Account established in Section 5.2.

“*Tax Agreement*” means the Tax Certificate and Agreement of the Issuer with respect to the Bonds dated as of the Initial Issue Date.

“*Termination Payment*” has the meaning given to such term in the Commodity Purchase Agreement.

“*Termination Payment Event*” has the meaning given to such term in the Commodity Purchase Agreement.

“*Trust Estate*” means (a) the proceeds of the sale of the Bonds, (b) all right, title and interest of the Issuer in, to and under the Commodity Supply Contract, (c) the Revenues, (d) any Termination Payment or the right to receive such Termination Payment (subject to the Collateral Agency Agreement), (e) all right, title and interest of the Issuer in, to and under the Receivables Purchase Exhibit, including payments received from the Commodity Supplier pursuant thereto, (f) all right, title and interest of the Issuer in, to and under each Interest Rate Swap and the Interest Rate Swap Receipts, and (g) the Pledged Funds (but excluding Rebate Payments held in any Fund or Account), including the investment income, if any, thereof subject only to the provisions of this Indenture permitting the application thereof for the purposes and on the terms and conditions set forth herein.

“*Trustee*” means Computershare Trust Company, N.A. and its successor or successors and any other corporation which may at any time be substituted in its place pursuant to this Indenture.

“*Undelivered Bond*” means any Bond which constitutes an Undelivered Bond under the provisions of Section 4.16.

“*Unpaid Amounts*” has the meaning assigned to such term in the Issuer Commodity Swap or the Commodity Supplier Commodity Swap as the context requires.

“*Underwriter*” means (a) with respect to the Series 2024 Bonds, Goldman Sachs & Co. LLC and (b) with respect to any other Series of Bonds, the municipal securities broker-dealer engaged by the Issuer to underwrite such Series of Bonds.

“*Variable Rate Bonds*” means Bonds bearing interest at a Daily Interest Rate, a Weekly Interest Rate, CP Interest Term Rates or an Index Rate.

“*Weekly Interest Rate*” means, with respect to a Series of Bonds, a variable interest rate established for such Bonds in accordance with Section 2.6.

“*Weekly Interest Rate Period*” means, with respect to a Series of Bonds, each period during which a Weekly Interest Rate is in effect for such Bonds.

“*Written Certificate,*” “*Written Direction,*” “*Written Instrument,*” “*Written Notice,*” “*Written Request*” and “*Written Statement*” of the Issuer means in each case an instrument in writing signed on behalf of the Issuer by an Authorized Officer thereof. Any such instrument and any supporting opinions or certificates may, but need not, be combined in a single instrument with any other instrument, opinion or certificate, and the two or more so combined shall be read and construed so as to form a single instrument. Any such instrument may be based, insofar as it relates to legal, accounting or engineering matters, upon the opinion or certificate of counsel, consultants, accountants or engineers, unless the Authorized Officer signing such Written Certificate, Direction, Instrument, Notice, Request or Statement knows, or in the exercise of reasonable care should know, that the opinion or certificate with respect to the matters upon which such Written Certificate, Direction, Instrument, Notice, Request or Statement may be based, as aforesaid, is erroneous. The same Authorized Officer, or the same counsel, consultant, accountant or engineer, as the case may be, need not certify to all of the matters required to be certified under any provision of this Indenture, but different Authorized Officers, counsel, consultants, accountants or engineers may certify to different facts, respectively. Every Written Certificate, Direction, Instrument, Notice, Request or Statement of the Issuer, and every certificate or opinion of counsel, consultants, accountants or engineers provided for herein shall include:

(a) a statement that the person making such certificate, direction, instrument, notice, request, statement or opinion has read the pertinent provisions of this Indenture to which such certificate, direction, instrument, notice, request, statement or opinion relates;

(b) a brief statement as to the nature and scope of the examination or investigation upon which the certificate, direction, instrument, notice, request, statement or opinion is based;

(c) a statement that, in the opinion of such person, he or she has made such examination or investigation as is necessary to enable him or her to express an informed opinion with respect to the subject matter referred to in the instrument to which his or her signature is affixed; and

(d) with respect to any statement relating to compliance with any provision hereof, a statement whether or not, in the opinion of such person, such provision has been complied with.

Section 1.2 Captions. The captions or headings in this Indenture are for convenience only and in no way define, limit or describe the scope and intent of any provisions of this Indenture.

Section 1.3 Rules of Construction. Except where the context otherwise requires, words of any gender shall include correlative words of the other genders; words importing the singular number shall include the plural number and vice versa; and words importing persons shall include firms, associations, trusts, corporations or governments or agencies or political subdivisions thereof. The term “include” and its derivations are not limiting.

References herein to contracts and agreements include all amendments or supplements thereto made in accordance with the terms thereof. References herein to Articles, Sections, Exhibits and Schedules are references to the Articles, Sections, Exhibits and Schedules of and to this Indenture.

Section 1.4 Governing Law. This Indenture shall be governed by and construed in accordance with the laws of the State of California.

Section 1.5 Consents. Whenever the consent of the Owners, the Issuer, the Commodity Supplier, the Remarketing Agent, any Interest Rate Swap Counterparty or a Commodity Swap Counterparty is required under the terms of this Indenture, such consent shall be evidenced by a written instrument providing for such consent and delivered to the Trustee.

ARTICLE II

AUTHORIZATION AND ISSUANCE OF BONDS

Section 2.1 Authorization of Bonds and Refunding Bonds; Application of Proceeds.

(a) For the purpose of financing the Cost of Acquisition of the Commodity Project, the following Series of Bonds, which shall be entitled to the benefit, protection and security of this Indenture is hereby authorized to be issued:

\$ _____ Commodity Supply Revenue Refunding Bonds, Series 2024, which shall bear interest during the Initial Interest Rate Period at a Fixed Rate; and

(b) The proceeds of the Series 2024 Bonds shall be deposited with the Trustee and disbursed, transferred and applied as provided in a Written Request of the Issuer delivered to the Trustee upon the issuance of the Series 2024 Bonds.

(c) In addition to the Series 2024 Bonds, there are hereby authorized to be issued by Supplemental Indenture one or more Series of Refunding Bonds for the purpose of refunding any Series of Bonds then Outstanding hereunder, subject to the following conditions:

(i) the Supplemental Indenture providing for issuance a Series of Refunding Bonds shall set forth (A) the Bonds to be refunded, (B) the Series designation and aggregate principal amount of the Refunding Bonds, (C) the Maturity Dates (which shall be no later than the Final Maturity Date) and any Sinking Fund Installments for the Refunding Bonds (D) the Scheduled Debt Service Deposits for such Bonds, and (E) the initial Interest Rate Period for such Bonds, and if such Interest Rate Period is to be an Index Rate Period, the applicable Index and the Applicable Spread and, if the Index is the SOFR Index, the Applicable Factor;

(ii) a Series of Refunding Bonds issued in a Fixed Rate Period may be sold at a premium;

(iii) the proceeds of a Series of Refunding Bonds (including any sale premium) shall be used exclusively to pay the Cost of Acquisition relating to the Refunding Bonds;

(iv) if such Bonds are Variable Rate Bonds, and if such Bonds are to bear interest at a Daily Interest Rate, a Weekly Interest Rate or CP Interest Term Rates, the Issuer shall have appointed a Remarketing Agent for such Bonds;

(v) the delivery to the Trustee of an Accountant's Certificate verifying ongoing cash flow sufficiency and Termination Payment sufficiency, provided that the Trustee shall have no duty or obligation to review the contents thereof and shall receive such Accountant's Certificate solely as a repository on behalf of Bondholders;

(vi) the delivery to the Trustee of the requests, opinions and documents required by Section 2.3; and

(vii) the receipt by the Trustee of a Rating Confirmation with respect to any Bonds Outstanding prior to the issuance of such Refunding Bonds that will remain Outstanding after the issuance thereof.

Section 2.2 Terms of Series 2024 Bonds; Payment. (a) The Series 2024 Bonds shall be dated as of the date of the initial authentication and delivery thereof, shall bear interest from such date, payable on each Interest Payment Date, and shall be subject to redemption as provided in Article IV. The principal and Redemption Price of and interest on the Series 2024 Bonds shall be payable at the designated corporate trust office of the Trustee, and such banking institution is hereby appointed Paying Agent and Bond Registrar for the Bonds; *provided that* interest on the Bonds may be paid, at the option of the Issuer, by check payable to the order of the Person entitled thereto, and mailed by first class mail, postage prepaid, to the address of such Person as shall appear on the books of the Issuer, which shall be held and controlled by the Bond Registrar and kept for such purposes at the designated corporate trust office of the Bond Registrar. The principal and Redemption Price of and interest on all Bonds shall also be payable at any other place which may be provided for such payment by the appointment of any other Paying Agent or Paying Agents as permitted by this Indenture. The Issuer shall provide Written Notice to the Trustee of the appointment of any additional Paying Agent.

(b) [The Series 2024 Bonds shall mature on the Maturity Dates and in the principal amounts set forth below, subject to Sinking Fund Installments as set forth in Section 4.2. The Initial Interest Rate Period for the Series 2024 Bonds shall be a Fixed Rate Period and the Series 2024 Bonds shall bear interest during such Interest Rate Period at the rates set forth below:

MATURITY DATE	PRINCIPAL AMOUNT	INTEREST RATE
_____ 1, 20__	\$	%
_____ 1, 20__		
_____ 1, 20__		
_____ 1, 20__		
_____ 1, 20__		
_____ 1, 20__		
_____ 1, 20__		
_____ 1, 20__		
_____ 1, 20__		
_____ 1, 20__		

; *provided that*, if a Ledger Event occurs under the Commodity Purchase Agreement and the Commodity Supplier [does not exercise the J. Aron Acceleration Option and] makes the Ledger Event Payments required by Section 17.2 of the Commodity Purchase Agreement, the Series 2024 Bonds shall bear interest at the Increased Interest Rate during an Increased Interest Rate Period that begins on the day on which such Ledger Event occurs. If the Increased Interest Rate Period ends due to the occurrence of a Termination Payment Event, then the Series 2024 Bonds shall bear interest at the rate(s) shown in the table above from and including the date of such Termination Payment Event to the associated extraordinary redemption date of the Series 2024 Bonds pursuant to Section 4.1. If the Increased Interest Rate Period ends due to the failure of the Commodity Supplier to pay Ledger Event Payments due pursuant to Section 17.2 of the Commodity Purchase Agreement, then the Series 2024 Bonds shall bear interest at the rate(s) shown in the table above from and including the Interest Payment Date immediately succeeding the last date on which the Commodity Supplier paid the Ledger Event Payments required by Section 17.2 of the Commodity Purchase Agreement until the earlier of their stated maturity, the Series 2024 Mandatory Purchase Date or any prior redemption date. The Issuer shall give prompt Written Notice to the Trustee of (i) the occurrence and date of a Ledger Event (which shall be the first day of the related Increased Interest Rate Period), and (ii) the occurrence and date of any Termination Payment Event (which shall be the last day of the related Increased Interest Rate Period). All references herein and in the Series 2024 Bonds to “interest” on the Series 2024 Bonds during the Initial Interest Rate Period, including all provisions relating to the accrual, computation and payment of interest, shall include interest at the Increased Interest Rate during any Increased Interest Rate Period.]

(c) Interest on the Series 2024 Bonds shall be payable to the date on which such Bonds shall have been paid in full. Interest on the Series 2024 Bonds shall be computed on the basis of a 360 day year consisting of twelve 30-day months.

(d) The initial interest rates for the Bonds of each Series and the determination for such Bonds of the Daily Interest Rate, the Weekly Interest Rate, the Index Rate or the Fixed Rate and each CP Interest Term and CP Interest Term Rate by the Remarketing Agent for such Bonds shall be conclusive and binding upon the Issuer, the Trustee, the Remarketing Agent and the Owners of the Bonds.

(e) In connection with any Fixed Rate Conversion Date of a Series of Bonds, the Sinking Fund Installments, if any, established for such Series pursuant to the applicable Supplemental

Indenture may be re-designated as Maturity Dates and Sinking Fund Installments for such Bonds on the Fixed Rate Conversion Date for such Bonds as provided for in the applicable Supplemental Indenture.

Section 2.3 Conditions for Issuance of Bonds. The Bonds of each Series shall be executed by the Issuer and delivered to the Trustee and thereupon shall be authenticated by the Trustee and delivered upon the Written Direction of the Issuer, but only upon the receipt by the Trustee of:

(a) A copy, certified by an Authorized Officer, of a resolution and/or evidence of any other official actions taken by the Issuer that authorize the execution and delivery of the Bonds, together with a Written Request as to the authentication and delivery of the Bonds, signed by an Authorized Officer;

(b) An Opinion or Opinions of Counsel to the effect that (A) the Issuer has the right and power to authorize and enter into this Indenture, the Commodity Supply Contract, the Commodity Purchase Agreement, the Issuer Commodity Swap and any Interest Rate Swap, and (B) the Commodity Supply Contract, the Commodity Purchase Agreement, the Issuer Commodity Swap and any Interest Rate Swap have been duly and lawfully authorized, executed and delivered by the Issuer, are in full force and effect and (assuming due authorization, execution and delivery by, and validity and binding effect upon, the other parties thereto) are valid, binding and enforceable upon the Issuer in accordance with their respective terms, and no other authorization for the Commodity Supply Contract, the Commodity Purchase Agreement, the Issuer Commodity Swap or any Interest Rate Swap is required; *provided*, that such Opinion(s) of Counsel may take exception as to the effect of, or for restrictions or limitations imposed by or resulting from, bankruptcy, insolvency, debt adjustment, moratorium, reorganization, arrangement, fraudulent conveyance or other similar laws relating to or affecting creditors' rights generally, and judicial discretion and the valid exercise of the sovereign police powers of the State and of the constitutional power of the United States of America and may state that no opinion is being rendered as to the availability of any particular remedy;

(c) An Opinion of Bond Counsel to the effect that (A) the Bonds constitute the valid and binding special obligations of the Issuer; (B) this Indenture has been duly executed and delivered by, and constitutes the valid and binding obligation of, the Issuer; (C) this Indenture creates a valid pledge of the Trust Estate to secure the payment of principal of and interest on the Bonds, of the Revenues and any other amounts (including proceeds of the sale of the Bonds) held by the Trustee in any fund or account established pursuant to this Indenture, except for Rebate Payments held in the Operating Fund, subject to the provisions of this Indenture permitting the application thereof for the purposes and on the terms and conditions set forth in this Indenture; and (D) the Bonds are not a lien or charge upon the funds or property of the Issuer except to the extent of the aforementioned pledge; *provided*, that such Opinion of Bond Counsel may take exception as to the effect of, or for restrictions or limitations imposed by or resulting from, bankruptcy, insolvency, debt adjustment, moratorium reorganization, arrangement, fraudulent conveyance, or other similar laws relating to or affecting creditors' rights generally and judicial discretion and

the valid exercise of the sovereign police powers of the State, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases, and may state that no opinion is being rendered as to the availability of any particular remedy under the financing documents;

(d) An opinion of Special Tax Counsel to the effect that, if applicable, interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code;

(e) Executed or certified copies of the Commodity Supply Contract;

(f) An opinion of counsel to the Project Participant to the effect that the Commodity Supply Contract has been duly authorized, executed and delivered by the Project Participant, is the valid and binding obligation of the Project Participant and is enforceable in accordance with its terms, subject to standard assumptions and exceptions with respect to enforceability; and

(g) A rating on the Bonds from at least one Rating Agency.

Section 2.4 Initial Interest Rate Period; Subsequent Interest Rate Periods. (a) The Series 2024 Bonds shall be initially issued in the Interest Rate Period set forth in Section 2.2(b). Upon the purchase of the Series 2024 Bonds on the Series 2024 Mandatory Purchase Date, the Interest Rate Period for the Series 2024 Bonds may be converted to a Daily Interest Rate Period, a Weekly Interest Rate Period, a Commercial Paper Interest Rate Period, an Index Rate Period, a Fixed Rate Period or a combination thereof, as provided in this Article II. In the event that two or more Interest Rate Periods are so established, the Series 2024 Bonds shall, by Supplemental Indenture, be divided into separate Series or sub-Series corresponding to such Interest Rate Periods.

(b) In the manner hereinafter provided, the term of each Series of Bonds will be divided into consecutive Interest Rate Periods during each of which such Bonds shall bear interest at the Daily Interest Rate, the Weekly Interest Rate, CP Interest Term Rates, a Fixed Rate or an Index Rate; *provided, however*, that the Interest Rate Period shall be the same for all Bonds of a Series, and no Bond shall bear interest in excess of the Maximum Rate. The Interest Rate Period for any Series of Bonds (other than the Initial Interest Rate Period for the Series 2024 Bonds) shall be established pursuant to the related Supplemental Indenture.

Section 2.5 Daily Interest Rate Period. (a) *Determination of Daily Interest Rates.* During each Daily Interest Rate Period for a Series of Bonds, the Bonds of such Series shall bear interest at the Daily Interest Rate, which shall be determined by the Remarketing Agent on or before 11:00 a.m., New York City time, on each Business Day for such Business Day. The Minimum Daily Interest Rate will be determined by the Remarketing Agent by 10:00 a.m., New York City time, on each Business Day for such Business Day; the Remarketing Agent will then modify the interest rate as necessary and determine the final Daily Interest Rate not later than 11:00 a.m., New York City time, on such date; the Remarketing Agent will advise the Trustee by Electronic Means of any change in the final Daily Interest Rate by 12:00 noon, New York City time, on the day such rate is determined. The Daily Interest Rate shall be the rate of interest per

annum determined by the Remarketing Agent to be the minimum interest rate which, if borne by the Bonds of the applicable Series, would enable the Remarketing Agent to sell the Bonds of such Series on that Business Day at a price (without regarding accrued interest) equal to not less than 100% of the principal amount thereof. With respect to any day that is not a Business Day, the Daily Interest Rate for that day shall be the same Daily Interest Rate established for the immediately preceding Business Day. In the event the Remarketing Agent fails to establish a Daily Interest Rate for any Business Day, then the Daily Interest Rate for that Business Day shall be the Daily Interest Rate for the immediately preceding Business Day if the Daily Interest Rate for the immediately preceding Business Day was established by the Remarketing Agent. Subject to the provisions of Section 2.10(d), in the event that the Daily Interest Rate for the immediately preceding Business Day was not determined by the Remarketing Agent, or in the event that the Daily Interest Rate determined by the Remarketing Agent shall be held to be invalid or unenforceable by a court of law, then the Daily Interest Rate shall be deemed to be equal to the SIFMA Index on the Business Day such Daily Interest Rate would otherwise be determined as provided herein for such Daily Interest Rate Period.

(b) *Conversion to Daily Interest Rate Period.* Subject to Section 2.10, at any time the Issuer, in a Written Direction of the Issuer delivered to the Trustee and the Remarketing Agent (if any), may elect that a Series of Bonds shall bear interest at a Daily Interest Rate. Such direction of the Issuer shall specify (i) the proposed effective date of such Conversion to a Daily Interest Rate Period, which shall be (A) a Business Day not earlier than the 30th day following the second Business Day after receipt by the Trustee of the Written Direction of the Issuer, (B) in the case of a Conversion from a Weekly Interest Rate Period, a Commercial Paper Interest Rate Period, an Index Rate Period or a Fixed Rate Period, the day immediately following the last day of such Interest Rate Period, or (C) in the case of the Series 2024 Bonds, a day on which such Bonds are subject to optional redemption pursuant to Section 4.3(b) or an applicable Supplemental Indenture; and (ii) the date of delivery for the Bonds to be purchased on the effective date of such Conversion to a Daily Interest Rate Period. In addition, such direction shall be accompanied by a form of notice required by Section 2.5(c) and a letter of Bond Counsel that it expects to be able to give a Favorable Opinion of Bond Counsel on the effective date of the Conversion to the Daily Interest Rate Period. During each Daily Interest Rate Period commencing on the date so specified and ending on the day immediately preceding the effective date of the next succeeding Interest Rate Period, the interest rate borne by the applicable Series of Bonds shall be a Daily Interest Rate.

(c) *Notice of Conversion to Daily Interest Rate Period.* The Trustee shall give notice by first class mail of a Conversion to a Daily Interest Rate Period to the Owners of the Bonds not less than 30 days prior to the proposed effective date of such Daily Interest Rate Period. Such notice shall state: (i) that the Interest Rate Period for such Bonds will be converted to a Daily Interest Rate Period unless Bond Counsel shall fail to deliver a Favorable Opinion of Bond Counsel as to such Conversion on the applicable Conversion Date; (ii) the proposed Conversion Date to the Daily Interest Rate Period; and (iii) that the Bonds are subject to mandatory tender for purchase on the proposed Conversion Date and setting forth the applicable Purchase Price and the place of delivery for purchase of such Bonds.

Section 2.6 Weekly Interest Rate Period. (a) *Determination of Weekly Interest Rates.* During each Weekly Interest Rate Period for a Series of Bonds, the Bonds of such Series shall bear

interest at the Weekly Interest Rate, which shall be determined by the Remarketing Agent by no later than 5:00 p.m., New York City time, on Wednesday of each week during such Weekly Interest Rate Period, or if such day shall not be a Business Day, then on the next succeeding Business Day. The Weekly Interest Rate for each Weekly Interest Rate Period shall be determined on or prior to the first day of such Weekly Interest Rate Period and shall apply to the period commencing on the first day of such Weekly Interest Rate Period and ending on the next succeeding Wednesday (whether or not a Business Day). Thereafter, each Weekly Interest Rate shall apply to the period commencing on Thursday (whether or not a Business Day) and ending on the next succeeding Wednesday (whether or not a Business Day), unless such Weekly Interest Rate Period shall end on a day other than Wednesday, in which event the last Weekly Interest Rate for such Weekly Interest Rate Period shall apply to the period commencing on Thursday (whether or not a Business Day) preceding the last day of such Weekly Interest Rate Period and ending on the last day of such Weekly Interest Rate Period. The Weekly Interest Rate shall be the rate of interest per annum determined by the Remarketing Agent to be the minimum interest rate which, if borne by the Bonds of the applicable Series, would enable the Remarketing Agent to sell the Bonds of such Series on the effective date of such rate at a price (without regarding accrued interest) equal to not less than 100% of the principal amount thereof. In the event that the Remarketing Agent fails to establish a Weekly Interest Rate for any week, then the Weekly Interest Rate for such week shall be the same as the Weekly Interest Rate for the immediately preceding week if the Weekly Interest Rate for such preceding week was determined by the Remarketing Agent. Subject to the provisions of Section 2.10(d), in the event that the Weekly Interest Rate for the immediately preceding week was not determined by the Remarketing Agent, or in the event that the Weekly Interest Rate determined by the Remarketing Agent shall be held to be invalid or unenforceable by a court of law, then the interest rate for such week shall be equal to the SIFMA Index on the day such Weekly Interest Rate would otherwise be determined as provided herein for such Weekly Interest Rate Period.

(b) *Conversion to Weekly Interest Rate Period.* Subject to Section 2.10, at any time, the Issuer, in a Written Direction of the Issuer delivered to the Trustee and the Remarketing Agent (if any), may elect that a Series of Bonds shall bear interest at a Weekly Interest Rate. Such direction of the Issuer shall specify (i) the proposed effective date of such Conversion to a Weekly Interest Rate Period, which shall be (A) a Business Day not earlier than the 30th day following the second Business Day after receipt by the Trustee of such Written Direction of the Issuer, (B) in the case of a Conversion from a Daily Interest Rate Period, a Commercial Paper Interest Rate Period, an Index Rate Period or a Fixed Rate Period, the day immediately following the last day of such Interest Rate Period, or (C) in the case of the Series 2024 Bonds, a day on which such Bonds are subject to optional redemption pursuant to Section 4.3(b) or an applicable Supplemental Indenture; and (ii) the date of delivery for such Bonds to be purchased on the effective date of such Conversion to a Weekly Interest Rate Period. In addition, such direction shall be accompanied by a form of notice required by Section 2.6(c) and a letter of Bond Counsel that it expects to be able to give a Favorable Opinion of Bond Counsel on the effective date of the Conversion to the Weekly Interest Rate Period. During each Weekly Interest Rate Period commencing on a date so specified and ending on the day immediately preceding the effective date of the next succeeding Interest Rate Period, the interest rate borne by the applicable Series of Bonds shall be a Weekly Interest Rate.

(c) *Notice of Conversion to Weekly Interest Rate.* The Trustee shall give notice by first-class mail of a Conversion to a Weekly Interest Rate Period to the Owners of the Bonds of the applicable Series not less than 30 days prior to the proposed effective date of such Weekly Interest Rate Period. Such notice shall state: (i) that the Interest Rate Period on such Bonds will be converted to a Weekly Interest Rate unless Bond Counsel fails to deliver a Favorable Opinion of Bond Counsel as to such Conversion on the applicable Conversion Date; (ii) the proposed Conversion Date to the Weekly Interest Rate Period; and (iii) that the Bonds of the applicable Series are subject to mandatory tender for purchase on the proposed Conversion Date and setting forth the applicable Purchase Price and the place of delivery for purchase of such Bonds.

Section 2.7 Fixed Rate Period. (a) *Determination of Fixed Rate.* During and in connection with a Fixed Rate Period for a Series of Bonds, (i) the Issuer may by Written Notice to the Trustee establish one or more Maturity Dates for the Bonds of such Series, and (ii) each maturity of such Bonds shall bear interest at a Fixed Rate. The Fixed Rate shall be determined by the Underwriter or the Remarketing Agent, as the case may be, on a Business Day no later than the Issue Date or the Fixed Rate Conversion Date for such Series of Bonds, as applicable. Subject to the provisions of Section 2.7(d), each Fixed Rate shall be the rate of interest per annum determined by the Underwriter or the Remarketing Agent, as the case may be, to be the minimum interest rate which, if borne by the Bonds of the applicable Series and maturity, would enable the Underwriter or the Remarketing Agent, as the case may be, to sell the Bonds of such Series and a maturity on such date at a price (without regard to accrued interest) equal to the principal amount thereof. If, for any reason, with respect to any Series of Bonds being converted to a Fixed Rate Period, the Fixed Rate for such Fixed Rate Period is not determined by the Remarketing Agent on or prior to the first day of such Fixed Rate Period, then the Interest Rate Period for the Bonds of the applicable Series shall be a Weekly Interest Rate Period and such Weekly Interest Rate Period shall continue until such time as the Interest Rate Period for such Series of Bonds shall have been converted to a Daily Interest Rate Period, a Commercial Paper Interest Rate Period, a Fixed Rate Period or an Index Rate Period as provided herein.

(b) *Conversion to or Continuation of Fixed Rate Period.*

(i) Subject to Section 2.10, at any time, the Issuer, in a Written Direction of the Issuer delivered to the Trustee and the Remarketing Agent (if any), may elect that the Bonds of a Series shall bear interest at a Fixed Rate. Such direction of the Issuer (A) shall specify the proposed effective date of the Fixed Rate Period, which date shall be (1) a Business Day not earlier than the 30th day following receipt by the Trustee of such Written Direction of the Issuer, (2) the day immediately following the last day of the Interest Rate Period then in effect, or (3) in the case of the Series 2024 Bonds, a day on which such Bonds are subject to optional redemption pursuant to Section 4.3(b) or an applicable Supplemental Indenture; (B) shall specify the last day of such Fixed Rate Period, which day shall be either the day immediately prior to the Final Maturity Date for the applicable Series of Bonds, or a day which both immediately precedes a Business Day and is at least 181 days after the effective date of Fixed Rate Period; and (C) with respect to any such Fixed Rate Period, may specify redemption prices and periods different than those set forth in this Indenture or the applicable Supplemental Indenture providing for the issuance of

such Series of Bonds, subject to the Favorable Opinion of Bond Counsel as provided in Section 2.7(b)(iii).

(ii) The day following the last day of any Fixed Rate Period for a Series of Bonds shall be a Fixed Rate Tender Date for such Bonds.

(iii) The election of the Issuer described in Section 2.7(b)(i) shall be accompanied by a letter or letters of Bond Counsel and/or Special Tax Counsel that it expects to be able to give a Favorable Opinion of Bond Counsel on the Fixed Rate Conversion Date and by a form of the notice to be mailed by the Trustee to the Owners of the Bonds of the applicable Series as provided in Section 2.7(c).

(iv) If, by the 29th day prior to the last day of any Fixed Rate Period that ends on a day other than the day immediately preceding the Final Maturity Date for the applicable Series of Bonds, the Trustee shall not have received Written Notice of the Issuer's election that, during the next succeeding Interest Rate Period, the Bonds of such Series shall bear interest at a Daily Interest Rate, a Weekly Interest Rate, a Fixed Rate, an Index Rate or CP Interest Term Rates, then the Bonds of the applicable Series shall be purchased on the applicable Mandatory Purchase Date pursuant to Section 4.13 and the Bonds shall not be remarketed.

(v) After the Final Fixed Rate Conversion Date for a Series of Bonds, the Bonds of the applicable Series shall no longer be subject to or have the benefit of the provisions of Section 4.11 through Section 4.22.

(c) *Notice of Conversion to or Continuation of Fixed Rate.* The Trustee shall give notice of a Conversion to a (or the establishment of another) Fixed Rate Period for a Series of Bonds to the Owners of the Bonds of such Series not less than 30 days prior to the proposed effective date of such Fixed Rate Period. Such notice shall state: (i) that the Interest Rate Period for such Bonds shall be converted to, or continue to be, a Fixed Rate Period unless Bond Counsel fails to deliver a Favorable Opinion of Bond Counsel as to such Conversion on the Fixed Rate Conversion Date; (ii) the proposed Fixed Rate Conversion Date; and (iii) that such Bonds are subject to mandatory tender for purchase on the Fixed Rate Conversion Date and setting forth the applicable Purchase Price and the place of delivery for purchase of such Bonds.

(d) *Sale at Premium or Discount.* As set forth in Section 2.4(a), the Series 2024 Bonds of each maturity have been sold with an initial issue premium. Notwithstanding the provisions of Section 2.7(a), the Fixed Rate for each maturity of any other Series of Bonds as initially issued, or the Fixed Rate for each maturity of any other Series of Bonds upon Conversion to a Fixed Rate Period, shall be the rate of interest per annum determined by the Underwriter or the Remarketing Agent, as applicable, to be the interest rate which, if borne by the Bonds of the applicable Series, would enable the Underwriter or the Remarketing Agent, as applicable, to sell such Bonds at a price (without regard to accrued interest) which will result in the lowest net interest cost for such Bonds, after taking into account any premium or discount at which such Bonds are sold by the Underwriter or the Remarketing Agent, as applicable, *provided that*:

(i) The Underwriter or the Remarketing Agent, as applicable, certifies in writing to the Trustee and the Issuer that the sale of such Bonds at the interest rate and premium or discount specified by the Underwriter or the Remarketing Agent, as applicable, is expected to result in the lowest net interest cost for such Bonds;

(ii) The Issuer consents in writing to the sale of such Bonds at such premium or discount;

(iii) In the case of a Conversion of the Interest Rate Period for a Series of Bonds to a Fixed Rate Period, or establishment of another Fixed Rate Period for such Bonds, and the sale of such Bonds at a premium, the Underwriter or the Remarketing Agent, as applicable, shall transfer the amount of such premium to the Trustee for deposit into such Funds and Accounts as shall be specified in a Written Direction of the Issuer;

(iv) In the case of a Conversion of the Interest Rate Period for a Series of Bonds to a Fixed Rate Period, or establishment of another Fixed Rate Period for such Bonds, on or before the date of determination of the Fixed Rate, the Issuer delivers to the Trustee and the Remarketing Agent a letter or letters of Bond Counsel and/or Special Tax Counsel to the effect that it expects to be able to give a Favorable Opinion of Bond Counsel on the Fixed Rate Conversion Date; and

(v) In the case of a Conversion of the Interest Rate Period for a Series of Bonds to a Fixed Rate Period, or establishment of another Fixed Rate Period for such Bonds, on or before the Conversion Date, a Favorable Opinion of Bond Counsel shall have been received by the Trustee and confirmed to the Issuer and the Remarketing Agent.

Section 2.8 Commercial Paper Interest Rate Periods. (a) Determination of CP Interest Terms and CP Interest Term Rates. During each Commercial Paper Interest Rate Period for a Series of Bonds, each Bond of such Series shall bear interest during each CP Interest Term for such Bond at the CP Interest Term Rate for such Bond. The CP Interest Term and the CP Interest Term Rate for each Bond need not be the same for any two Bonds of such Series, even if determined on the same date. Each of such CP Interest Terms and CP Interest Term Rates for each Bond shall be determined by the Remarketing Agent no later than the first day of each CP Interest Term. Each CP Interest Term shall be for a period of days within the range or ranges announced as possible CP Interest Terms no later than 9:30 a.m., New York City time, on the first day of each CP Interest Term by the Remarketing Agent. Each CP Interest Term for each Bond of the applicable Series shall be a period of not more than 180 days, determined by the Remarketing Agent to be the period which, together with all other CP Interest Terms for all Bonds of the applicable Series then Outstanding, will result in the lowest overall interest expense on such Bonds over the next succeeding one hundred eighty (180) days. Each CP Interest Term shall end on either a day which immediately precedes a Business Day or on the day immediately preceding the Final Maturity Date for the applicable Series of Bonds. If, for any reason, a CP Interest Term for any Bond cannot be so determined by the Remarketing Agent, or if the determination of such CP Interest Term is held by a court of law to be invalid or unenforceable, then such CP Interest Term shall be thirty (30) days, but if the last day so determined shall not be a day immediately preceding a Business Day, such CP Interest Term shall end on the first day immediately preceding the

Business Day next succeeding such last day, or if such last day would be after the day immediately preceding the Final Maturity Date for the applicable Series of Bonds, shall end on the day immediately preceding such Final Maturity Date. In determining the number of days in each CP Interest Term, the Remarketing Agent shall take into account the following factors: (i) existing short-term, tax-exempt market rates and indices of such short-term rates; (ii) the existing market supply and demand for short-term tax-exempt securities; (iii) existing yield curves for short-term and long-term tax-exempt securities for obligations of credit quality comparable to the Bonds of the applicable Series; (iv) general economic conditions; (v) industry economic and financial conditions that may affect or be relevant to the Bonds of the applicable Series; (vi) the CP Interest Terms of other Bonds of the applicable Series; and (vii) such other facts, circumstances and conditions pertaining to financial markets as the Remarketing Agent, in its sole discretion, shall determine to be relevant.

The CP Interest Term Rate for each CP Interest Term for each Bond in a Commercial Paper Interest Rate Period shall be the rate of interest per annum determined by the Remarketing Agent to be the minimum interest rate which, if borne by such Bond, would enable the Remarketing Agent to sell such Bond on the effective date of such rate at a price equal to the principal amount thereof. Subject to the provisions of Section 2.10(d), if, for any reason, a CP Interest Term Rate for any Bond in a Commercial Paper Interest Rate Period is not so established by the Remarketing Agent for any CP Interest Term, or if such CP Interest Term Rate is determined by a court of law to be invalid or unenforceable, then the CP Interest Term Rate for such CP Interest Term shall be a rate per annum equal to the SIFMA Index on the first day of such CP Interest Term.

(b) *Conversion to Commercial Paper Interest Rate Period.* Subject to Section 2.10, at any time, the Issuer, in a Written Direction of the Issuer to the Trustee and the Remarketing Agent (if any), may elect that a Series of Bonds shall bear interest at CP Interest Term Rates. Such Written Direction of the Issuer shall specify (i) the proposed effective date of the Commercial Paper Interest Rate Period, which shall be (A) a Business Day not earlier than the thirtieth (30th) day following the second Business Day after receipt by the Trustee of such direction, (B) the day immediately following the last day of the Interest Rate Period then in effect, or (C) in the case of the Series 2024 Bonds, a day on which such Bonds are subject to optional redemption pursuant to Section 4.3(b) or an applicable Supplemental Indenture; and (ii) the date of delivery of such Bonds to be purchased. In addition, the Written Direction of the Issuer shall be accompanied by (i) a letter of Bond Counsel that it expects to be able to give a Favorable Opinion of Bond Counsel on the Conversion Date, and (ii) a form of the notice to be mailed by the Trustee to the Owners of the Bonds of the applicable Series as provided in Section 2.8(c). During each Commercial Paper Interest Rate Period commencing on the date so specified and ending on the day immediately preceding the effective date of the next succeeding Interest Rate Period, each Bond of such Series shall bear interest at a CP Interest Term Rate applicable to the CP Interest Term then in effect for such Bond.

(c) *Notice of Conversion to CP Interest Term Rates.* The Trustee shall give notice by first-class mail of a Conversion to a Commercial Paper Interest Rate Period to the Owners of the Bonds of the applicable Series not less than 30 days prior to the proposed effective date of such Commercial Paper Interest Rate Period. Such notice shall state: (i) that such Bonds shall bear interest at CP Interest Term Rates unless Bond Counsel fails to deliver a Favorable Opinion of

Bond Counsel as to such Conversion on the Conversion Date or other conditions precedent to such adjustment are not met; (ii) the proposed Conversion Date; and (iii) that such Bonds are subject to mandatory tender for purchase on such proposed Conversion Date, regardless of whether any or all conditions precedent to such Conversion are met, and setting forth the applicable Purchase Price and the place of delivery for purchase of such Bonds.

(d) *Conversion from Commercial Paper Interest Rate Period.* Subject to Section 2.10(b), at any time during a Commercial Paper Interest Rate Period for a Series of Bonds, the Issuer may elect, pursuant to Section 2.5(b), Section 2.6(b), Section 2.7(b) or Section 2.9(c), that such Bonds no longer shall bear interest at CP Interest Term Rates and shall instead bear interest at a Daily Interest Rate, a Weekly Interest Rate, a Fixed Rate or an Index Rate, as specified in such election. In connection with any such election, and notwithstanding any provision contained in this Section 2.8 to the contrary, each CP Interest Term established by the Remarketing Agent for the Bonds shall end on the same date in order to facilitate the Conversion of such Bonds. The date on which all CP Interest Terms determined for the Bonds end shall be the last day of the then-current Commercial Paper Interest Rate Period and the day next succeeding such date shall be the effective date of the Daily Interest Rate Period, Weekly Interest Rate Period, Fixed Rate Period or Index Rate Period elected by the Issuer for such Bonds.

Section 2.9 Index Rate Periods. (a) *Determination of Applicable Spread.* In connection with the issuance of a Series of Bonds bearing interest at an Index Rate, or the Conversion of the Interest Rate Period for a Series of Bonds to an Index Rate Period, the Underwriter or the Remarketing Agent, as applicable, shall determine the Applicable Spread and, if applicable, the Applicable Factor, and shall specify the same in the Index Rate Determination Certificate for the applicable Index Rate Period. The Applicable Spread and any Applicable Factor for an Index Rate Period shall be such amount or percentage as shall result in the minimum interest rate which, if borne by the Bonds of the applicable Series as of the first day of the applicable Index Rate Period, under Prevailing Market Conditions, would enable the Underwriter or the Remarketing Agent, as applicable, to sell the Bonds at a price equal to one hundred percent (100%) of the aggregate principal amount of such Bonds on the first day of the applicable Index Rate Period.

(b) *Determination of Index Rate.*

(i) During any Index Rate Period for a Series of Bonds, such Bonds shall bear interest at an Index Rate, as specified in the applicable Index Rate Determination Certificate delivered to the Trustee on or before the first day of such Interest Rate Period.

(ii) With respect to each SIFMA Index Rate Period, the Calculation Agent shall (A) determine the SIFMA Index by 4:00 p.m., New York City time, on each Wednesday or, if such Wednesday is not a Business Day, the Business Day immediately succeeding such Wednesday, and (B) determine the SIFMA Index Rate at or before 12:00 noon, New York City time, on each Index Rate Reset Date. The Calculation Agent shall furnish each SIFMA Index Rate so determined to the Issuer and the Trustee by Electronic Means not later than each Index Rate Reset Date.

(iii) With respect to each SOFR Index Rate Period, the Calculation Agent shall (A) determine and provide to the Trustee by Electronic Means the SOFR Index by 4:00 p.m., New York City time, on each SOFR Publish Date, and (B) determine and provide to the Trustee by Electronic Means the SOFR Index Rate at or before 12:00 noon, New York City time, on each SOFR Effective Date.

(iv) During any Index Rate Period, interest shall be computed on the basis of a 365 or 366-day year and actual days elapsed. The Calculation Agent shall calculate and provide by Electronic Means to the Issuer and the Trustee the amount of interest due and payable on each Series of Bonds bearing interest at an Index Rate (A) with respect to a Series of Bonds bearing interest at the SIFMA Index Rate, on or prior to each Interest Payment Date, and (B) with respect to a Series of Bonds bearing interest at the SOFR Index Rate, on each Interest Payment Date, which in the case of a Series of Bonds bearing interest at the SOFR Index Rate shall be the SOFR Interest Calculation Date. The amount of interest due on a Series of Bonds bearing interest at the SIFMA Index Rate on any Interest Payment Date shall be calculated on the basis of the actual number of days in the calendar month immediately preceding such Interest Payment Date. The amount of interest due on a Series of Bonds bearing interest at the SOFR Index Rate on any Interest Payment Date shall be calculated on the basis of the actual number of days in the SOFR Accrual Period immediately preceding such Interest Payment Date. All percentages resulting from any step in the calculation of interest on a Series of Bonds while in an Index Rate Period will be rounded, if necessary, to the nearest ten thousandth of a percentage point (*i.e.*, to five decimal places) with five hundred thousandths of a percentage point rounded upward, and all dollar amounts used in or resulting from such calculation of interest on such Bonds while in an Index Rate Period will be rounded to the nearest cent (with one-half cent being rounded upward).

(v) Upon the written request of any Bondholder, the Trustee shall (A) confirm the applicable Index Rate then in effect, and (B) provide the calculation of, and supporting data for, the amount of interest due on a Series of Bonds bearing interest at an Index Rate on each Interest Payment Date.

(vi) In determining the Index Rate that any Bond shall bear as provided in this Section 2.9, neither the Underwriter nor the Remarketing Agent, as applicable, the Calculation Agent, nor the Trustee shall have any liability to the Issuer or the Holder of such Bond, except for its negligence or willful misconduct.

(vii) If, during any Index Rate Period, the Index or rate used to determine an Index Rate is not reported by the relevant source at the time necessary for determination of such Index Rate or otherwise ceases to be available, the Issuer or its independent financial advisor shall determine a substitute or replacement Index Rate (as applicable), including any Alternative Rate and any Adjustments, and promptly provide the same via Electronic Means to the Trustee and the Calculation Agent, together with the effective date of the substitute or replacement Index Rate,

which substitute or replacement must be consistent with any corresponding substitute or replacement index designated pursuant to the relevant Interest Rate Swap.

(c) *Index Rate Continuation.*

(i) On any Mandatory Purchase Date pursuant to Section 4.13 or in the case of the Series 2024 Bonds, a day on which such Bonds are subject to optional redemption pursuant to Section 4.3(b) or an applicable Supplemental Indenture, and unless the Issuer has given written notice with respect to the Conversion of the Bonds to an Interest Rate Period other than the Index Rate Period, the Issuer may establish a new Index Rate Period and a new Index Rate for the Bonds with such right to be exercised by delivery of an Index Rate Continuation Notice to the Trustee no less than 30 days prior to the effective date of the new Index Rate Period. The Index Rate Continuation Notice shall be accompanied by a letter or letters of Bond Counsel and/or Special Tax Counsel to the effect that it expects to be able to deliver a Favorable Opinion of Bond Counsel on the effective date of the new Index Rate Period.

(ii) Any establishment of a new Index Rate and Index Rate Period for a Series of Bonds pursuant to paragraph (i) above must comply with the following conditions:

(A) the first day of such new Index Rate Period must be a Mandatory Purchase Date for such Bonds pursuant to the provisions of Section 4.13, and such Bonds shall be required to be tendered for purchase on such date;

(B) the first day of such new Index Rate Period must be a Business Day;
and

(C) no new Index Rate shall become effective unless (x) the Favorable Opinion of Bond Counsel referred to in paragraph (i) above is delivered on the first day of the new Index Rate Period and (y) no Failed Remarketing has occurred.

(iii) Upon receipt by the Trustee of an Index Rate Continuation Notice from an Authorized Officer of the Issuer, as soon as practicable, but in any event not less than 10 Business Days prior to the first day of the proposed Index Rate Period, the Issuer (or any Dissemination Agent appointed by the Issuer) shall give notice by first-class mail or by Electronic Means via EMMA to the Holders of the Bonds of the applicable Series, which notice shall state in substance:

(A) that a new Index Rate Period and Index Rate is to be established for such Bonds and the proposed effective date of such new Index Rate Period (which date shall be the Mandatory Purchase Date for such Bonds pursuant to Section 4.13), and that such new Index Rate Period and Index Rate will become effective on such date if the conditions specified in this Section 2.9 are satisfied on or before such date;

(B) that all Bonds of the applicable Series are subject to mandatory tender for purchase on the applicable Mandatory Purchase Date pursuant to Section 4.13 (whether or not the proposed new Index Rate Period becomes effective on such date) at the Purchase Price, which shall be specified therein;

(C) the first day of the new Index Rate Period;

(D) that the new Index Rate Period and Index Rate for the Bonds shall not be established unless a Favorable Opinion of Bond Counsel is delivered to the Trustee on the first day of the new Index Rate Period and no Failed Remarketing has occurred;

(E) the CUSIP numbers or other identification information of the Bonds of the applicable Series; and

(F) that, to the extent that there shall be on deposit with the Trustee on the first day of the new Index Rate Period an amount of money sufficient to pay the Purchase Price thereof, all the Bonds not delivered to the Trustee on or prior to such date shall be deemed to have been properly tendered for purchase and shall cease to constitute or represent a right on behalf of the Holder thereof to the payment of principal thereof or interest thereon and shall represent and constitute only the right to payment of the Purchase Price on deposit with the Trustee, without interest accruing thereon after such date.

(d) *End of Index Rate Period.* In the event the Issuer has not given an Index Rate Continuation Notice or other Written Notice reasonably acceptable to the Trustee with respect to the Conversion of Bonds to an Interest Rate Period other than an Index Rate Period, in either case at the time required by this Indenture, or if the conditions to the effectiveness of a new Index Rate Period and new Index Rate set forth in Section 2.9(c)(ii) are not satisfied, including as a result of the Remarketing Agent's failure to establish an Index Rate as herein provided, then the Bonds of the applicable Series shall be purchased on the applicable Mandatory Purchase Date pursuant to Section 4.13 and the Bonds shall not be remarketed.

Section 2.10 Notice of Conversion. (a) In the event that the Issuer shall elect to convert the Interest Rate Period for a Series of Bonds to a Daily Interest Rate Period, a Weekly Interest Rate Period, a Fixed Rate Period, an Index Rate Period or a Commercial Paper Interest Rate Period as provided in this Article II, then the Written Direction of the Issuer required to be delivered to the Trustee by the applicable provision of this Article II shall be given by registered or certified mail, or by Electronic Means.

(b) Notwithstanding anything in this Article II, in connection with any Conversion of the Interest Rate Period for a Series of Bonds, the Issuer shall have the right to deliver to the Trustee and the Remarketing Agent (if any), on or prior to 10:00 a.m., New York City time, on the third Business Day preceding the effective date of any such Conversion a Written Direction of the Issuer to the effect that the Issuer elects to rescind its election to make such Conversion. If the Issuer rescinds its election to make such Conversion, then the Interest Rate Period shall not be converted

and the Bonds of the applicable Series shall continue to bear interest in the Daily Interest Rate Period, Weekly Interest Rate Period, Fixed Rate Period, Commercial Paper Interest Rate Period or Index Rate Period, as the case may be, as in effect immediately prior to such proposed Conversion (*provided*, that the period of any such continuing Fixed Rate Period shall be one year). In any event, if notice of a Conversion has been mailed to the Owners as provided in this Article II and the Issuer rescinds its election to make such Conversion, then the Bonds of the applicable Series shall continue to be subject to mandatory tender for purchase on the date which would have been the Conversion Date as provided in Section 4.14.

(c) No Conversion of a Series of Bonds from one Interest Rate Period to another shall take effect under this Indenture unless each of the following conditions, to the extent applicable, shall have been satisfied:

(i) the Trustee shall have received a Favorable Opinion of Bond Counsel with respect to such Conversion;

(ii) with respect to any Series of Bonds bearing interest at an Index Rate or a Fixed Rate, no Conversion may occur with respect to such Bonds earlier than (A) the Business Day following the last day of the applicable Interest Rate Period or (B) in the case of the Series 2024 Bonds, a day on which such Bonds are subject to optional redemption pursuant to Section 4.3(b) or an applicable Supplemental Indenture;

(iii) in the case of any Conversion of the Interest Rate Period for a Series of Bonds to a Daily Interest Rate Period, a Weekly Interest Rate Period or a Commercial Paper Interest Rate Period, prior to the Conversion Date the Issuer shall have appointed a Remarketing Agent and shall have executed and delivered a Remarketing Agreement with respect to such Series of Bonds; and

(iv) in the case of a Conversion of the Interest Rate Period for a Series of Bonds to an Index Rate Period, prior to the Conversion Date the Issuer shall have appointed a Calculation Agent and executed and delivered a Calculation Agent Agreement with respect to such Series of Bonds.

(d) If any condition to the Conversion of the Interest Rate Period for a Series of Bonds shall not have been satisfied, then the Interest Rate Period shall not be converted and the Bonds of the applicable Series shall continue in the Daily Interest Rate Period, Weekly Interest Rate Period, Index Rate Period, Fixed Rate Period, or Commercial Paper Interest Rate Period, as the case may be, as in effect immediately prior to such proposed Conversion (*provided*, that the period of any such continuing Fixed Rate Period shall be one year), and the Bonds of such Series shall continue to be subject to mandatory tender for purchase on the date which would have been the effective date of the Conversion as provided in Section 4.14.

(e) Notwithstanding anything in this Article II to the contrary, in connection with the Conversion of the Interest Rate Period for a Series of Bonds from a Fixed Rate Period that would require the mandatory tender for purchase of such Bonds at a Purchase Price greater than the principal amount thereof, the Issuer, as a condition to exercising its option to cause a Conversion

of the Interest Rate Period, shall deliver to the Trustee, prior to the mailing of notice of such Conversion, a description of the source of the Funds to be used to pay such premium.

Section 2.11 Liquidity Facility. In connection with the issuance of Refunding Bonds pursuant to Section 2.1(c) or, at any time after the Series 2024 Mandatory Purchase Date, the conversion of Bonds pursuant to Section 2.5(b), Section 2.6(b), Section 2.7(b), Section 2.8(b), or Section 2.9(c), the Issuer may elect to obtain a Liquidity Facility for such Bonds if they are to be Variable Rate Bonds. If the Issuer makes such an election, the terms of the Liquidity Facility and the Liquidity Facility Provider with respect to such Bonds, and the mechanics for drawing on such Liquidity Facility, shall be set forth in a Supplemental Indenture.

Section 2.12 Provisions Regarding the Issuer Commodity Swap. (a) In connection with the Commodity Project, the Issuer shall enter into the initial Issuer Commodity Swap with the Commodity Swap Counterparty. The following shall apply to the Commodity Swaps:

(i) The method for the calculation of the Commodity Swap Payments and Commodity Swap Receipts, as applicable, and the scheduled payment dates therefor, are set forth in Schedule III hereto.

(ii) Commodity Swap Payments shall be made by the Trustee for the account of the Issuer from the Operating Fund and, if required, the Commodity Swap Reserve Account.

(iii) Commodity Swap Receipts shall be payable directly to the Trustee for the account of the Issuer and shall be deposited directly into the Revenue Fund.

(b) The following shall apply with respect to restrictions on replacement and termination of the Issuer Commodity Swap:

(i) The Issuer agrees that it will not exercise any right to declare an early termination date under an Issuer Commodity Swap unless either (A) the Issuer has entered into a replacement Issuer Commodity Swap in accordance with clause (ii), (iii) or (iv) below, and such replacement Issuer Commodity Swap will be effective as of such early termination date and cover price exposure from and after such early termination date, or (B) a “Commodity Delivery Termination Date” has occurred or has been designated under (and as such term is defined in) the Commodity Purchase Agreement prior to or as of such early termination date.

(ii) The Issuer may replace an Issuer Commodity Swap (and any related guaranty of a Commodity Swap Counterparty’s obligations thereunder) with a similar agreement for the same hedging purposes with an alternate Commodity Swap Counterparty at any time upon delivery to the Trustee of a Rating Confirmation.

(iii) If an Issuer Commodity Swap is subject to termination (or, in the case of clause (B) below, is terminated) by either party in accordance with its terms, then (A) the Issuer may, subject to clause (i) above, terminate such Issuer Commodity Swap if the Issuer

has the right to do so, and (B) (I) the Issuer may replace such Issuer Commodity Swap by exercising its right to increase its notional quantities under another Issuer Commodity Swap with another Commodity Swap Counterparty if such Issuer Commodity Swap is in effect and is not subject to termination, or (II) if the Issuer cannot increase its notional quantities under clause (I) or if the Issuer desires to enter into a new Issuer Commodity Swap in order to reduce its notional quantities under the Issuer Commodity Swap to their level previous following an increase of such notional quantities under clause (I), the Issuer may enter into a replacement Issuer Commodity Swap with an alternate Commodity Swap Counterparty without Rating Confirmation, but only if the replacement Issuer Commodity Swap is identical in all material respects to the existing Issuer Commodity Swap, except for the identity of the Commodity Swap Counterparty, and (1) the replacement Commodity Swap Counterparty (or its credit support provider under such Issuer Commodity Swap) is then rated at least the lower of (a) the Minimum Rating or (b) the rating then assigned by each Rating Agency to the Bonds, or (2) such Commodity Swap Counterparty provides such collateral and security arrangements as the Issuer shall determine to be necessary, and (3) in either case, such replacement Commodity Swap Counterparty enters into a replacement Commodity Supplier Custodial Agreement with the Commodity Supplier and the Custodian that is identical in all material respects to the existing Commodity Supplier Custodial Agreement for the Commodity Swap being replaced.

(iv) If an Issuer Commodity Swap is not otherwise replaced but the Commodity Supplier is obligated under Section 3(d) of a Commodity Supplier Custodial Agreement to continue paying Commodity Swap Receipts in the same amount that would have applied under such Issuer Commodity Swap, then such Issuer Commodity Swap will be deemed to be replaced by such obligation under such Commodity Supplier Custodial Agreement and such obligation under the Commodity Supplier Custodial Agreement will be treated as the Issuer Commodity Swap thereafter until such terminated Issuer Commodity Swap is otherwise replaced by another Issuer Commodity Swap.

(c) The following shall apply with respect to the termination of the Issuer Commodity Swap:

(i) Upon the occurrence of a Commodity Swap Replacement Event (defined below), the Issuer shall (A) notify the Commodity Supplier of such event pursuant to Section 17.5(b) of the Commodity Purchase Agreement, and (B) in accordance with Section 17.5(c) of the Commodity Purchase Agreement, either (I) replace the affected Issuer Commodity Swap by exercising its right to increase its notional quantities under the Issuer Commodity Swap with another Commodity Swap Counterparty if such a Commodity Swap is in effect and is not subject to termination, and otherwise (II) use its good faith efforts to replace such Issuer Commodity Swap with an alternate Issuer Commodity Swap during the swap replacement period set forth in Section 17.5(d) of the Commodity Purchase Agreement.

(ii) A “*Commodity Swap Replacement Event*” occurs if (A) an Issuer Commodity Swap terminates, (B) the Issuer or a Swap Counterparty delivers a termination

notice under an Issuer Commodity Swap or (C) an Issuer Commodity Swap is otherwise reasonably anticipated to become subject to immediate termination.

Section 2.13 Provisions Regarding Interest Rate Swap. (a) In connection with the issuance of any Variable Rate Bonds, the Issuer shall enter into an Interest Rate Swap with an Interest Rate Swap Counterparty. The following shall apply to the Interest Rate Swap:

(i) The method for the calculation of the Interest Rate Swap Payments and Interest Rate Swap Receipts, as applicable, and the scheduled payment dates therefor are set forth in the Interest Rate Swap;

(ii) Interest Rate Swap Payments shall be made by the Trustee for the account of the Issuer out of the Debt Service Account on parity with principal and interest payments on Bonds; and

(iii) Interest Rate Swap Receipts shall be payable directly to the Trustee for the account of the Issuer and shall be deposited directly into the Debt Service Account.

(b) The following shall apply with respect to restrictions on replacement and termination of the Interest Rate Swap:

(i) The Issuer agrees that it will not exercise any right to declare an early termination date under the Interest Rate Swap unless either (a) the Issuer has entered into a replacement Interest Rate Swap in accordance with clause (ii) and (iii) below, and such replacement Interest Rate Swap will be effective as of such early termination date and cover interest rate exposure from and after such early termination date, or (b) in all other cases, the Commodity Purchase Agreement will terminate prior to or as of such early termination date.

(ii) The Issuer may replace the Interest Rate Swap (and any related guaranty of the Interest Rate Swap Counterparty's obligations thereunder) with a similar agreement for the same hedging purposes with an alternate Interest Rate Swap Counterparty at any time upon delivery to the Trustee of a Rating Confirmation.

(iii) If the Interest Rate Swap is subject to termination (or, in the case of clause (B) below, is terminated) by either party in accordance with its terms, then (A) the Issuer may, subject to clause (i) above, terminate the Interest Rate Swap if the Issuer has the right to do so, and (B) the Issuer may enter into a replacement Interest Rate Swap with an alternate Interest Rate Swap Counterparty without Rating Confirmation, but only if the replacement Interest Rate Swap is identical in all material respects to the existing Interest Rate Swap, except for the identity of the Interest Rate Swap Counterparty, and (1) the alternate Interest Rate Swap Counterparty (or its credit support provider under the Interest Rate Swap) is then rated at least the lower of (a) the Minimum Rating or (b) the rating then assigned by each Rating Agency to the Bonds, or (2) the Interest Rate Swap Counterparty provides such collateral and security arrangements as the Issuer shall determine to be necessary.

ARTICLE III

GENERAL TERMS AND PROVISIONS OF BONDS

Section 3.1 Medium of Payment; Form and Date; Letters and Numbers. (a) The Bonds shall be payable, with respect to interest, principal and Redemption Price, in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts.

(b) The Bonds may be issued only in the form of fully registered Bonds without coupons, in Authorized Denominations. The Bonds shall be in substantially the form set forth in Exhibit A hereto, and may be printed, engraved, typewritten or otherwise produced.

(c) Unless the Issuer shall otherwise direct, the Bonds shall be numbered from one upward.

Section 3.2 Legends. The Bonds may contain or have endorsed thereon such provisions, specifications and descriptive words not inconsistent with the provisions of this Indenture as may be necessary or desirable to comply with custom, the rules of any securities exchange or commission or brokerage board, or otherwise, as may be determined by the Issuer prior to the authentication and delivery thereof.

Section 3.3 Execution and Authentication. (a) the Issuer and the Trustee agree that the Electronic Signature of a party to this Indenture, including all acknowledgements, authorizations, directions, waivers and consents thereto (or any amendment or supplement thereto) shall be as valid as an original signature of such party and shall be effective to bind such party to this Indenture. The Issuer and the Trustee agree that any Electronically Signed Document (including this Indenture) shall be deemed (i) to be “written” or “be in writing,” (ii) to have been signed, and (iii) to constitute a record established and maintained in the ordinary course of business and an original written record when printed from electronic files.

(b) The Bonds shall be executed in the name of the Issuer by the manual or facsimile signature of its Chair, Vice Chair or other Authorized Officer, and its seal (or a facsimile thereof), if any, shall be impressed, imprinted, engraved or otherwise reproduced thereon and attested by the manual or facsimile signature of its Secretary, an Assistant Secretary or other Authorized Officer, or in such other manner as may be required or permitted by law. In case any one or more of the officers who shall have signed or sealed any of the Bonds shall cease to be such officer before the Bonds so signed and sealed shall have been authenticated and delivered by the Trustee, such Bonds may, nevertheless, be authenticated and delivered as herein provided, and may be issued as if the Persons who signed or sealed such Bonds had not ceased to hold such offices. Any Bond may be signed and sealed on behalf of the Issuer by such Persons as at the time of the execution of such Bonds shall be duly authorized or hold the proper office in the Issuer, although at the date borne by the Bonds such Persons may not have been so authorized or have held such office.

(c) The Bonds shall bear thereon a certificate of authentication, in the form set forth in Exhibit A hereto, executed manually by the Trustee. Only such Bonds as shall bear thereon such certificate of authentication shall be entitled to any right or benefit under this Indenture, and no Bond shall be valid or obligatory for any purpose until such certificate of authentication shall have been duly executed by the Trustee. Such certificate of the Trustee upon any Bond executed on behalf of the Issuer shall be conclusive evidence that the Bond so authenticated has been duly authenticated and delivered under this Indenture and that the Holder thereof is entitled to the benefits of this Indenture.

Section 3.4 Exchange, Transfer and Registry. (a) The Bonds shall be registered as transferred only upon the books of the Issuer, which shall be held and controlled by the Bond Registrar and kept for such purposes at the designated corporate trust office of the Bond Registrar, by the registered owner thereof in person or by its attorney duly authorized in writing, upon surrender thereof together with a written instrument of transfer, in form and with guaranty of signature satisfactory to the Bond Registrar duly executed by the registered owner or its duly authorized attorney. The transferor shall also provide, or cause to be provided, to the Trustee all information reasonably required by the Trustee to allow it to comply with any applicable federal, state or local tax reporting obligations, including, without limitation, any cost-basis reporting obligations under Section 6045 of the Internal Revenue Code. The Trustee may rely upon such information provided to it and shall have no responsibility to verify or ensure the accuracy of such information. Upon the registration of transfer of any Bond, the Issuer shall issue in the name of the transferee a new Bond or Bonds of the same Series, aggregate principal amount and maturity as the surrendered Bond.

(b) The registered owner of any Bond or Bonds of one or more denominations shall have the right to exchange such Bond or Bonds for a new Bond or Bonds of any denomination then authorized for such Bond or Bonds of the same Series, aggregate principal amount and maturity of the surrendered Bond or Bonds. Such Bond or Bonds shall be exchanged by the Issuer for a new Bond or Bonds upon the request of the registered owner thereof in person or by its attorney duly authorized in writing, upon surrender of such Bond or Bonds together with a written instrument requesting such exchange, in form and with guaranty of signature satisfactory to the Bond Registrar duly executed by the registered owner or its duly authorized attorney.

(c) The Issuer and each Fiduciary may deem and treat the Person in whose name any Bond shall be registered upon the books of the Issuer maintained by the Bond Registrar as the absolute owner of such Bond, whether such Bond shall be overdue or not, for the purpose of receiving payment of, or on account of, the principal and Redemption Price, if any, of and interest on such Bond and for all other purposes, and all such payments so made to any such registered owner or upon its order shall be valid and effectual to satisfy and discharge the liability upon such Bond to the extent of the sum or sums so paid, and neither the Issuer nor any Fiduciary shall be affected by any notice to the contrary.

Section 3.5 Regulations with Respect to Exchanges and Registration of Transfers. In all cases in which the privilege of exchanging or registering the transfer of Bonds is exercised, the Issuer shall execute and the Trustee shall authenticate and deliver Bonds in accordance with the provisions of this Indenture. All Bonds surrendered in any such exchanges or registration of

transfer shall forthwith be delivered to the Trustee and cancelled or retained by the Trustee. Prior to every such exchange or registration of transfer of Bonds, whether temporary or definitive, the Issuer or the Bond Registrar may require the Holder to pay an amount sufficient to reimburse it for any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer. Unless otherwise provided in a Supplemental Indenture, neither the Issuer nor the Bond Registrar shall be required (a) to register the transfer or exchange of Bonds for the period next preceding any Interest Payment Date for the Bonds, beginning with the Regular Record Date for such Interest Payment Date and ending on such Interest Payment Date, or for the period next preceding any date for the proposed payment of Defaulted Interest with respect to such Bonds beginning with the Special Record Date for the date of such proposed payment and ending on the date of such proposed payment, (b) to register the transfer or exchange of Bonds for a period beginning 15 days before the mailing of any notice of redemption of such Bonds and ending on the day of such mailing, or (c) to register the transfer or exchange of any Bonds called for redemption. Every Person that transfers Bonds shall timely provide or cause to be timely provided to the Trustee all information necessary to allow the Trustee to comply with any applicable tax reporting obligations, including without limitation any cost-basis reporting obligations under Section 6045 of the Internal Revenue Code and regulations promulgated thereunder. The Trustee may rely on the information provided to it and shall have no responsibility to verify or ensure the accuracy of such information.

Section 3.6 Bonds Mutilated, Destroyed, Stolen or Lost. If any Bond becomes mutilated or is lost, stolen or destroyed, the Issuer may execute and the Trustee shall authenticate and deliver a new Bond of like Series, date of issue, maturity date, principal amount and interest rate per annum as the Bond so mutilated, lost, stolen or destroyed, provided that (a) in the case of such mutilated Bond, such Bond is first surrendered to the Trustee, (b) in the case of any such lost, stolen or destroyed Bond, there is first furnished evidence of such loss, theft or destruction, in form satisfactory to the Trustee together with indemnity satisfactory to the Trustee while the Bonds are held in a Book-Entry System and to the Trustee and the Issuer at all other times, (c) all other reasonable requirements of the Issuer, set forth in a Written Instrument of the Issuer delivered to the Trustee are complied with, and (d) expenses in connection with such transaction are paid by the Holder. Any Bond surrendered for registration of transfer shall be cancelled. Any such new Bonds issued pursuant to this Section 3.6 in substitution for Bonds alleged to be destroyed, stolen or lost shall constitute original additional contractual obligations on the part of the Issuer, whether or not the Bonds so alleged to be destroyed, stolen or lost be at any time enforceable by anyone, and shall be equally secured by and entitled to equal and proportionate benefits with all other Bonds issued under this Indenture, in any moneys or securities held by the Issuer or any Fiduciary for the benefit of the Bondholders.

Section 3.7 Temporary Bonds. (a) Until the definitive Bonds are prepared, the Issuer may execute, in the same manner as is provided in Section 3.3, and upon the request of the Issuer, the Trustee shall authenticate and deliver, in lieu of definitive Bonds, but subject to the same provisions, limitations and conditions as the definitive Bonds, one or more temporary Bonds substantially of the tenor of the definitive Bonds in lieu of which such temporary Bond or Bonds are issued, and with such omissions, insertions and variations as may be appropriate to temporary Bonds. The Issuer at its own expense shall prepare and execute and, upon the surrender of such temporary Bonds for exchange and the cancellation of such surrendered temporary Bonds, the

Trustee shall authenticate and, without service charge to the Owner thereof (except a sum sufficient to cover any tax, fee or other governmental charge that may be imposed in relation thereto), deliver in exchange therefor, definitive Bonds of the same aggregate principal amount and maturity as the temporary Bonds surrendered. Until so exchanged, the temporary Bonds shall in all respects be entitled to the same benefits and security as definitive Bonds authenticated and issued pursuant to this Indenture.

(b) All temporary Bonds surrendered in exchange either for another temporary Bond or Bonds or for a definitive Bond or Bonds shall be forthwith cancelled by the Trustee.

Section 3.8 Payment of Interest on Bonds; Interest Rights Preserved. Interest on any Bond which is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the Person in whose name that Bond is registered at the close of business on the date (hereinafter, the “*Regular Record Date*”) which is the 15th day of the calendar month next preceding such Interest Payment Date.

Any interest on any Bond which is payable, but is not punctually paid or duly provided for, on any Interest Payment Date (hereinafter, “*Defaulted Interest*”) shall forthwith cease to be payable to the Person who was the registered owner on the relevant Regular Record Date; and such Defaulted Interest shall be paid by the Issuer to the Persons in whose names the Bonds are registered at the close of business on a date (hereinafter, the “*Special Record Date*”) for the payment of such Defaulted Interest, which shall be fixed in the following manner: the Issuer shall notify the Bond Registrar in writing of the amount of Defaulted Interest proposed to be paid on each Bond and the date of the proposed payment, and at the same time the Issuer shall deposit with the Paying Agent an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to and approved in writing by the Paying Agent for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as in this Section 3.8 provided. Thereupon the Bond Registrar shall fix a Special Record Date for the payment of such Defaulted Interest which shall be not more than 15 days or less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Bond Registrar of written notice of the proposed payment. The Bond Registrar shall promptly notify the Issuer of such Special Record Date and, in the name and at the expense of the Issuer, shall cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be mailed, first class postage prepaid, to each Bondholder at its address as it appears upon the registry books, not less than 10 days prior to such Special Record Date.

Subject to the foregoing provisions of this Section 3.8, each Bond delivered under this Indenture upon registration of transfer of or in exchange for or in lieu of any other Bond shall carry the rights to interest accrued and unpaid, and to accrue, which were carried by such other Bond.

Section 3.9 Book Entry System; Appointment of Securities Depository. All Bonds shall be registered in the name of Cede & Co., as nominee for DTC, as Securities Depository, and held in the custody or for the account of the Securities Depository. A single certificate will be issued and delivered to the Securities Depository for each maturity of Bonds, and the Beneficial Owners will not receive physical delivery of Bond certificates except as provided in this Indenture. For so

long as the Securities Depository shall continue to serve as securities depository for the Bonds as provided herein, all transfers of Beneficial Ownership interests will be made by book-entry only, and no investor or other party purchasing, selling or otherwise transferring Beneficial Ownership of Bonds is to receive, hold or deliver any Bond certificate.

The Issuer may, with written notice to the Trustee but without the consent of any Bondholders, appoint a successor Securities Depository and enter into an agreement with the successor Securities Depository, to establish procedures with respect to a Book-Entry System for the Bonds not inconsistent with the provisions of this Indenture. Any successor Securities Depository shall be a “clearing agency” registered under Section 17A of the Securities Exchange Act of 1934, as amended.

The Issuer and the Trustee may rely conclusively upon (i) a certificate of the Securities Depository as to the identity of the Participants in the Book-Entry System with respect to the Bonds, and (ii) a certificate of any such Participant as to the identity of, and the respective principal amount of the Bonds beneficially owned by the Beneficial Owners.

Whenever, during the term of the Bonds, the Beneficial Ownership of any Series thereof is determined by a book-entry at the Securities Depository, the requirements in this Indenture of holding, delivering or transferring such Bonds shall be deemed modified to require the appropriate Person to meet the requirements of the Securities Depository as to registering or transferring the book-entry to produce the same effect. Any provision hereof permitting or requiring delivery of the Bonds shall, while such Bonds are in such Book-Entry System, be satisfied by the notation on the books of the Securities Depository in accordance with applicable state law. Notwithstanding the foregoing, the Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any security (including any transfers between or among Securities Depository Participants or Beneficial Owners) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

Except as otherwise specifically provided herein with respect to the rights of Participants and Beneficial Owners, when a Book-Entry System is in effect, the Issuer and the Trustee may treat the Securities Depository (or its nominee) as the sole and exclusive owner of the Bonds registered in its name for the purposes of payment of the principal or purchase price of and interest on such Bonds or portion thereof to be redeemed or purchased, of giving any notice permitted or required to be given to the Bondholders under this Indenture and of voting, and neither the Issuer nor the Trustee shall be affected by any notice to the contrary. Neither the Issuer nor the Trustee will have any responsibility or obligations to the Securities Depository, any Participant, any Beneficial Owner or any other Person which is not shown on the bond register, with respect to (a) the accuracy of any records maintained by the Securities Depository or any Participant; (b) the payment by the Securities Depository or by any Participant of any amount due to any Beneficial Owner in respect of the principal amount or redemption or purchase price of, or interest on, any Bonds; (c) the delivery of any notice by the Securities Depository or any Participant; (d) the selection of the Beneficial Owners to receive payment in the event of any partial redemption of

any of the Bonds; or (e) any other action taken by the Securities Depository or any Participant. The Trustee shall pay all principal or Redemption Price of and interest on the Bonds registered in the name of Cede only to or “upon the order of” the Securities Depository (as that term is used in the Uniform Commercial Code as adopted in the State and New York), and all such payments shall be valid and effective to fully satisfy and discharge the Issuer’s obligations with respect to the principal, Redemption Price or purchase price of and interest on such Bonds to the extent of the sum or sums so paid.

The Book-Entry System may be discontinued by the Trustee and the Issuer, at the Written Direction and expense of the Issuer, and the Issuer and the Trustee will cause the delivery of Bond certificates to such Beneficial Owners of the Bonds and registered in the names of such Beneficial Owners as shall be specified to the Trustee by the Securities Depository in writing, under the following circumstances:

(a) The Securities Depository determines to discontinue providing its service with respect to any Bonds and no successor Securities Depository is appointed as described above. Such a determination may be made at any time by giving 30 days’ written notice to the Issuer and the Trustee and discharging its responsibilities with respect thereto under applicable law; or

(b) The Issuer determines, with written notice to the Trustee, not to continue the Book-Entry System through a Securities Depository for the Bonds.

In connection with any proposed transfer outside the Book-Entry System of the Securities Depository, the Securities Depository or the Issuer shall provide or cause to be provided to the Trustee all information necessary to allow the Trustee to comply with any applicable tax reporting obligations, including without limitation any cost-basis reporting obligations under Section 6045 of the Internal Revenue Code and regulations thereunder. The Trustee may rely on the information provided to it and shall have no responsibility to verify or ensure the accuracy of such information.

When the Book-Entry System is not in effect, all references herein to the Securities Depository shall be of no further force or effect.

ARTICLE IV

REDEMPTION OF BONDS AND TENDER PROVISIONS

Section 4.1 Extraordinary Redemption. (a) The Bonds shall be subject to mandatory redemption prior to maturity in whole, and not in part, on the first day of the Month following the Early Termination Payment Date, which redemption date in the case of a Failed Remarketing will be the same day as the affected Mandatory Purchase Date, at the following Redemption Prices:

(i) in the case of a Series of Fixed Rate Bonds, the Amortized Value thereof,
and

in each case plus accrued and unpaid interest to the date of redemption at the Fixed Rate or an Increased Interest Rate, whichever is then in effect.

(b) The Series 2024 Bonds maturing on and after the Series 2024 Mandatory Purchase Date are subject to redemption at the option of the Issuer in whole or in part on and after the first Business Day of the third month preceding the Series 2024 Mandatory Purchase Date at a Redemption Price, calculated by a quotation agent selected by the Issuer, equal to the Amortized Value thereof as of the date of redemption, plus \$0. __ per \$1,000 of the principal amount thereof and accrued and unpaid interest to the date of redemption, provided that, if the optional redemption date is the Mandatory Purchase Date, the Redemption Price shall be the principal amount thereof plus accrued and unpaid interest to the date of redemption.

(c) The Issuer shall provide Written Notice of the identity of the quotation agent to the Trustee.

(d) The Series 2024 Bonds shall also be subject to redemption at the option of the Issuer, as provided in a Supplemental Indenture executed in connection with a Conversion of the Bonds.

(e) In lieu of redeeming Series 2024 Bonds pursuant to this Section, the Trustee may, upon the Written Direction of the Issuer, use such funds as may be available by the Issuer or as are otherwise available hereunder to purchase such Series 2024 Bonds at a Purchase Price equal to the applicable Redemption Price of such Series 2024 Bonds. Any Series 2024 Bonds so purchased may be remarketed in a new Interest Rate Period or may be cancelled by the Trustee, in either case as set forth in the Written Direction of the Issuer.

Section 4.4 Redemption Notice. When the Trustee receives Written Notice from the Issuer, in the form of Exhibit D hereto, of the Issuer's election or direction to optionally redeem Bonds, the Trustee shall give notice, at the expense and for and on behalf of the Issuer, substantially in the form attached to Exhibit D, or when redemption of Bonds is authorized or required (a) pursuant to Section 4.1, or (b) other than at the election or direction of the Issuer pursuant to Section 4.7, the Trustee shall give notice, at the expense and for and on behalf of the Issuer (substantially in the form attached to Exhibit E with respect to an extraordinary redemption pursuant to Section 4.1(a)) hereto, of the redemption of such Bonds by first-class mail, postage prepaid, (i) for Fixed Rate Bonds, not less than twenty (20) days (fifteen (15) days in the case of redemption pursuant to Section 4.1) (or such shorter time as may be permitted by the Securities Depository) and not more than forty-five (45) days (30 days in the case of redemption pursuant to Section 4.1) prior to the redemption date and (ii) for Variable Rate Bonds, not less than 20 days (fifteen (15) days in the case of redemption pursuant to Section 4.1) (or such shorter time as may be permitted by the Securities Depository) and not more than thirty (30) days prior to the redemption date, to the registered owner of each Bond being redeemed, at its address as it appears on the bond registration books of the Trustee or at such address as such owner may have filed with the Trustee for that purpose, as of the Regular Record Date. In case of a redemption pursuant to Section 4.1, the notice of redemption of the Series 2024 Bonds may (A) include a statement that, if the Series 2024 Bonds are not redeemed for any reason, the Series 2024 Bonds shall be subject to mandatory tender for purchase on the Series 2024 Mandatory Purchase Date, and (B) be

combined with notice of the mandatory tender of the Series 2024 Bonds on the Series 2024 Mandatory Purchase Date pursuant to Section 4.16.

Each notice of redemption shall identify the Bonds to be redeemed and shall state (i) the redemption date, (ii) the Redemption Price or the manner in which it will be calculated, (iii) that the Bonds called for redemption must be surrendered to collect the Redemption Price, (iv) the address or addresses of the Trustee at which the Bonds redeemed must be surrendered, and (v) that interest on the Bonds called for redemption ceases to accrue on the redemption date.

With respect to any notice of optional redemption of Bonds, unless upon the giving of such notice such Bonds shall be deemed to have been paid within the meaning of Section 12.1 of this Indenture, such notice shall state that such redemption shall be conditioned upon the receipt by the Trustee on or prior to the date fixed for such redemption of money sufficient to pay the Redemption Price of and interest on the Bonds to be redeemed, and that if such money shall not have been so received said notice shall be of no force and effect, and the Issuer shall not be required to redeem such Bonds. In the event that such notice of redemption contains such a condition and such money is not so received, the redemption shall not be made and the Trustee shall within a reasonable time thereafter give notice, in the manner in which the notice of redemption was given, that such money was not so received and that such redemption was not made.

In the event that the Bonds may be subject to extraordinary redemption as a result of a Failed Remarketing that could occur if the Trustee has not received the Purchase Price of the Bonds by noon New York City time on the fifth Business Day preceding a Mandatory Purchase Date, a notice of extraordinary redemption of the Bonds pursuant to this Section 4.4 may be a conditional notice of redemption, delivered in each case not less than fifteen (15) days prior to such Mandatory Purchase Date, stating that: (a) such redemption shall be conditioned upon the Trustee's failure to receive, by noon New York City time on the fifth Business Day preceding such Mandatory Purchase Date, the Purchase Price of the Bonds required to be purchased on such Mandatory Purchase Date, and (b) if the full amount of the Purchase Price has been received by the Trustee by noon New York City time on the fifth Business Day preceding such Mandatory Purchase Date, the Bonds shall be purchased pursuant to Section 4.13 or Section 4.14 hereof on such Mandatory Purchase Date rather than redeemed. If the full amount of the Purchase Price has been received by the Trustee by noon New York City time on the fifth Business Day preceding such Mandatory Purchase Date, the Trustee shall withdraw such conditional notice of redemption prior to such Mandatory Purchase Date and the Bonds shall be purchased pursuant to Section 4.13 or Section 4.14 hereof on such Mandatory Purchase Date rather than redeemed.

Failure of the registered owner of any Bonds which are to be redeemed to receive any such notice, or any defect in such notice, shall not affect the validity of the proceedings for the redemption of any other Bonds as to which proper notice was given as provided herein.

Section 4.5 Bonds Redeemed in Part. Upon surrender of a Bond redeemed in part, the Issuer will execute and the Trustee will authenticate and deliver to the Holder thereof a new Bond or Bonds in Authorized Denominations equal in principal amount to the unredeemed portion of the Bond surrendered. Notwithstanding anything herein to the contrary, so long as the Bonds are held in the Book-Entry System the Bonds will not be delivered as set forth above; rather transfers

of Beneficial Ownership of such Bonds to the Person indicated above will be effected on the registration books of the Securities Depository pursuant to its rules and procedures.

Section 4.6 Redemption at the Election or Direction of the Issuer. In the case of any redemption of Bonds at the election or direction of the Issuer, the Issuer shall give Written Notice to the Trustee of its election or direction so to redeem, the Series, Maturity Dates, principal amounts by Maturity Dates and CUSIP numbers of the Bonds to be redeemed, the Redemption Price or the manner in which it will be calculated for each Maturity Date of Bonds to be redeemed, and the date on which such Bonds are to be redeemed, and directing the Trustee to provide notice of such redemption to the Owners of such Bonds pursuant to Section 4.4 (maturities and principal amounts thereof to be redeemed shall be determined by the Issuer in its sole discretion), at least thirty-five (35) days prior to the applicable redemption date or such lesser notice as shall be agreed to by the Trustee. In the event notice of redemption shall have been given as in Section 4.4 provided, there shall be paid on or prior to the redemption date to the appropriate Paying Agents an amount in cash which, in addition to other moneys, if any, available therefor held by such Paying Agents, will be sufficient to redeem on the redemption date at the Redemption Price thereof, plus interest accrued and unpaid to the redemption date, all of the Bonds to be redeemed. The Issuer shall promptly notify the Trustee in writing of all such payments by it to such Paying Agents.

Section 4.7 Redemption Other than at the Issuer's Election or Direction. Whenever by the terms of this Indenture the Trustee is required or authorized to redeem Bonds other than at the election or direction of the Issuer, the Trustee shall (a) select the Bonds or portions of Bonds to be redeemed, (b) give the notice of redemption and (c) pay out of moneys available therefor the Redemption Price thereof, plus interest accrued and unpaid to the redemption date, to the appropriate Paying Agents in accordance with the terms of this Article IV and, to the extent applicable, Section 5.7 and Section 5.8.

Section 4.8 Selection of Bonds to Be Redeemed. If less than all of the Bonds of like maturity and Series shall be called for redemption, the particular Bonds or portions of Bonds to be redeemed shall be selected by lot in such manner as the Trustee shall determine, in its sole discretion, from Bonds not previously called for redemption; provided, however, that the portion of any Bond of a denomination of more than a minimum Authorized Denomination to be redeemed shall be in the principal amount of such minimum Authorized Denomination or a multiple thereof, and that, in selecting portions of such Bonds for redemption, the Trustee shall treat each such Bond as representing that number of Bonds of a minimum Authorized Denomination which is obtained by dividing by such minimum Authorized Denomination the principal amount of such Bond to be redeemed in part (and, provided, further, however, that any Bonds held in the Book-Entry System shall be subject to the rules and procedures of the Securities Depository).

Section 4.9 Payment of Redeemed Bonds. Notice having been given in the manner provided in Section 4.4, the Bonds or portions thereof so called for redemption shall become due and payable on the redemption date so designated at the Redemption Price, plus interest accrued and unpaid to the redemption date, and, upon presentation and surrender thereof at the office specified in such notice, such Bonds, or portions thereof, shall be paid at the Redemption Price, plus interest accrued and unpaid to the redemption date. If there shall be drawn for redemption

less than all of a Bond, the Issuer shall execute and the Trustee shall authenticate and the Paying Agent shall deliver, upon the surrender of such Bond, without charge to the owner thereof, for the unredeemed balance of the principal amount of the Bonds so surrendered, Bonds of like maturity in any of the Authorized Denominations. If, on the redemption date, moneys for the redemption of all the Bonds or portions thereof of any like maturity to be redeemed, together with interest to the redemption date, shall be held by the Paying Agents so as to be available therefor on said date and if notice of redemption shall have been given as aforesaid, then, from and after the redemption date interest on the Bonds or portions thereof of so called for redemption shall cease to accrue and become payable. If said moneys shall not be so available on the redemption date, such Bonds or portions thereof shall continue to bear interest until paid at the same rate as they would have borne had they not been called for redemption. Upon the payment of the Redemption Price of and any accrued interest on the Bonds being redeemed, each check or other transfer of funds issued for such purpose shall bear the CUSIP number identifying, by maturity, the Bonds being redeemed with the proceeds of such check or other transfer.

Section 4.10 Cancellation and Destruction of Bonds. All Bonds paid or redeemed either at or before maturity shall be delivered to the Trustee when such payment or redemption is made, and such Bonds, together with all Bonds purchased or redeemed pursuant to Section 5.11(c) that have been delivered to the Trustee for application as a credit against Sinking Fund Installments and all Bonds purchased by the Trustee pursuant to the Written Direction of the Issuer, shall thereupon be promptly cancelled (or deemed to have been cancelled). Bonds so cancelled may, to the extent permitted by law, at any time be destroyed by the Trustee, who shall execute a certificate of destruction in duplicate by the signature of one of its authorized officers describing the Bonds so destroyed, and one executed certificate shall be filed with the Issuer and the other executed certificate shall be retained by the Trustee.

Section 4.11 Optional Tender During Daily or Weekly Interest Rate Periods. (a) During any Daily Interest Rate Period or Weekly Interest Rate Period for a Series of Bonds, any Eligible Bond of such Series shall be purchased from its Owner at the option of the Owner on any Business Day at the applicable Purchase Price, payable in immediately available funds, upon delivery to the Trustee at its designated corporate trust office for delivery of notices and the Remarketing Agent of an irrevocable written notice which states the name of the Owner, the principal amount and the date on which the same shall be purchased, which date shall be a Business Day not prior to the seventh day next succeeding the date of the delivery of such notice to the Trustee. Any notice delivered to the Trustee after 4:00 p.m., New York City time, shall be deemed to have been received on the next succeeding Business Day. Payment of such Purchase Price shall be made from the sources and in the order of priority set forth in Section 4.15(e) on the date specified in such notice, provided such Bond is delivered, at or prior to 10:00 a.m., New York City time, on the date specified in such notice, to the Trustee at its designated corporate trust office, accompanied by an instrument of transfer thereof, in form satisfactory to the Trustee, executed in blank by the Owner thereof or by the Owner's duly-authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange.

(b) So long as the Bonds are registered in the name of Cede & Co., as nominee for DTC, only direct or indirect Participants may give notice of the election to tender Bonds or portions

thereof and the Beneficial Owners shall not have the right to tender Bonds directly to the Trustee, except through such Participants.

Section 4.12 Mandatory Tender for Purchase on Day Next Succeeding the Last Day of Each CP Interest Term. On the day next succeeding the last day of each CP Interest Term for an Eligible Bond in a Commercial Paper Interest Rate Period, unless such day is the first day of a new Interest Rate Period for such Bond (in which event such Bond shall be subject to mandatory purchase pursuant to Section 4.14), such Bond shall be purchased from its Owner at the applicable Purchase Price payable in immediately available funds, provided such Bond is delivered to the Trustee on or prior to 10:00 a.m., New York City time, on such day, or if delivered after 10:00 a.m., New York City time, on the next succeeding Business Day; provided, however, that in any event such Bond will not bear interest at the CP Interest Term Rate after the last day of the applicable CP Interest Term. The Purchase Price of any Bond so purchased shall be payable from the sources and in the order of priority set forth in Section 4.15(e) only upon surrender of such Bond to the Trustee at its designated corporate trust office, accompanied by an instrument of transfer thereof, in form satisfactory to the Trustee, executed in blank by the Owner thereof or by the Owner's duly-authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange.

Section 4.13 Mandatory Tender for Purchase on the Index Rate Tender Date or Fixed Rate Tender Date. On the Index Rate Tender Date or Fixed Rate Tender Date for a Series of Bonds, unless such day is the first day of a new Interest Rate Period for such Bonds (in which event such Bonds shall be subject to mandatory purchase pursuant to Section 4.14), each Eligible Bond of such Series shall be purchased from the Owner thereof at the applicable Purchase Price, payable in immediately available funds, provided such Bond is delivered to the Trustee on or prior to 10:00 a.m., New York City time, on such day, or if delivered after 10:00 a.m., New York City time, on the next succeeding Business Day; provided, however, that in any event such Bond will not bear interest at the applicable Index Rate or Fixed Rate after the last day of the applicable Index Rate Period or Fixed Rate Period, respectively. The Purchase Price of any Bond so purchased shall be payable from the sources and in the order of priority specified in Section 4.15(e) only upon surrender of such Bond to the Trustee at its designated corporate trust office, accompanied by an instrument of transfer thereof, in form satisfactory to the Trustee, executed in blank by the Owner thereof or by the Owner's duly-authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange. The Series 2024 Bonds shall be subject to mandatory tender pursuant to this Section 4.13 on the Series 2024 Mandatory Purchase Date.

Section 4.14 Mandatory Tender for Purchase on Conversion of Interest Rate Period. Eligible Bonds of a Series shall be subject to mandatory tender for purchase upon the Conversion of the Interest Rate Period for such Bonds pursuant to Section 2.5(b), Section 2.6(b), Section 2.7(b), Section 2.8(b), or Section 2.9(c) on the first day of such Interest Rate Period (or on the day which would have been the first day of an Interest Rate Period for such Bonds had one of the events specified in Section 2.10(c) or, if applicable, Section 2.7(b), not occurred which resulted in the Interest Rate Period not being converted) at the applicable Purchase Price, payable in immediately available funds. The Purchase Price of any Bond so purchased shall be payable from the sources and in the order of priority specified in Section 4.15(e) only upon surrender of such

Bond to the Trustee at its designated corporate trust office, accompanied by an instrument of transfer thereof, in form satisfactory to such Trustee, executed in blank by the Owner thereof or by the Owner's duly-authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange at or prior to 10:00 a.m., New York City time, on the date specified for such delivery in this paragraph or in the notice provided pursuant to Section 2.10.

Section 4.15 General Provisions Relating to Tenders. (a) *Creation of Bond Purchase Fund.* (i) There shall be created and established hereunder with the Trustee a fund to be designated the "Bond Purchase Fund" to be held in trust only for the benefit of the Owners of tendered Bonds who shall thereafter be restricted exclusively to the moneys held in such fund for the satisfaction of any claim for the Purchase Price of such tendered Bonds. The Bond Purchase Fund and the Accounts therein are not Pledged Funds.

(ii) There shall be created and designated the following Accounts with respect to each Series of Bonds within the Bond Purchase Fund: the "Remarketing Proceeds Account" and the "Issuer Purchase Account." Moneys paid to the Trustee for the purchase of tendered or deemed tendered Bonds of a Series received from (A) the Remarketing Agent shall be deposited in the Remarketing Proceeds Account for such Series in accordance with the provisions of Section 4.15(d)(ii) and (B) the Issuer shall be deposited in the Issuer Purchase Account in accordance with the provisions of Section 4.15(d)(iii). Moneys provided by the Issuer not required to be used in connection with the purchase of tendered Bonds shall be returned to the Issuer in accordance with Section 4.15(e).

(iii) Moneys in the Issuer Purchase Account and the Remarketing Proceeds Account with respect to a Series of Bonds shall not be commingled with other funds held by the Trustee and shall remain uninvested. The Issuer shall have no right, title or interest in any of the funds held on deposit in the Remarketing Proceeds Account or any remarketing proceeds held for any period of time by the Remarketing Agent.

(b) *Deposit of Bonds.* The Trustee agrees to hold all Bonds delivered to it pursuant to Section 4.11, Section 4.12, Section 4.13, or Section 4.14 in trust for the benefit of the respective Owners which shall have so delivered such Bonds until moneys representing the Purchase Price of such Bonds have been delivered to such Owner in accordance with the provisions of this Indenture and until such Bonds shall have been delivered by the Trustee in accordance with Section 4.15(f).

(c) *Remarketing of Bonds.* (i) Immediately upon its receipt, but not later than 12:00 noon, New York City time on the following Business Day, from an Owner of a Bond bearing interest at a Daily Interest Rate or a Weekly Interest Rate of a notice pursuant to Section 4.11, the Trustee shall notify the Remarketing Agent by Electronic Means, of such receipt, specifying the principal amount of Bonds for which it has received such notice, the names of the Owners thereof and the date on which such Bonds are to be purchased in accordance with Section 4.11.

(ii) As soon as practicable, but in no event later than 10:15 a.m., New York City time, on a Purchase Date, the Remarketing Agent shall inform the Trustee by Electronic

Means, of the principal amount of Purchased Bonds to be purchased on such date, the name, address and taxpayer identification number of each such purchaser, and the Authorized Denominations in which such Purchased Bonds are to be delivered. Upon receipt from the Remarketing Agent of such information, and in no event later than 12:30 p.m., New York City time, on the Purchase Date, the Trustee shall prepare Purchased Bonds in accordance with such information received from the Remarketing Agent for the registration of transfer and redelivery to the Remarketing Agent pursuant to paragraph (f) of this Section 4.15.

(iii) Any Purchased Bonds which are subject to mandatory tender for purchase in accordance with Section 4.12, Section 4.13 or Section 4.14 which are not presented to the Trustee on the Purchase Date and any Purchased Bonds which are the subject of a notice pursuant to Section 4.16 which are not presented to the Trustee on the Purchase Date, shall, in accordance with the provisions of Section 4.16, be deemed to have been purchased upon the deposit of moneys equal to the Purchase Price thereof into any or all of the accounts of the Bond Purchase Fund.

(d) *Deposits of Funds.* (i) The Trustee shall deposit into the Remarketing Proceeds Account for the applicable Series of Bonds any amounts received by it in immediately available funds by 12:30 p.m., New York City time, on any Purchase Date from the Remarketing Agent against receipt of Bonds by the Remarketing Agent pursuant to Section 4.15(f) and on account of Purchased Bonds remarketed pursuant to the terms of the Remarketing Agreement.

(ii) The Issuer may, in its sole discretion, pay to the Trustee in immediately available funds the amount equal to the difference, if any, between the total Purchase Price of Bonds to be purchased and the amount of money deposited under Section 4.15(d)(i) (the “*Additional Liquidity Drawing Amount*”) by 12:45 p.m., New York City time. The Trustee shall deposit any Additional Liquidity Drawing Amounts into the Issuer Purchase Account for the applicable Series of Bonds.

(iii) The Trustee shall hold all proceeds received from the Remarketing Agent or the Issuer pursuant to this Section 4.15(d) in trust for the tendering Owners. In holding such proceeds and moneys, the Trustee will be acting on behalf of such Owners by facilitating the purchase of the Bonds and not on behalf of the Issuer and will not be subject to the control of the Issuer. Subject to the provisions of Section 4.15(e), following the discharge of the pledge created by Section 5.1 or after payment in full of the Bonds, the Trustee shall pay any moneys remaining in any Account of the Bond Purchase Fund directly to the Persons for whom such money is held upon presentation of evidence reasonably satisfactory to the Trustee that such Person is rightfully entitled to such money and the Trustee shall not pay such amounts to any other Person.

(e) *Disbursements; Payment of Purchase Price.* Moneys delivered to the Trustee on a Purchase Date shall be applied at or before 1:00 p.m., New York City time, on such Purchase Date to pay the Purchase Price of Purchased Bonds of the applicable Series in immediately available funds as follows in the indicated order of application and, to the extent not so applied on such date,

shall be held in the separate and segregated Accounts of the Bond Purchase Fund for the benefit of the Owners of the Purchased Bonds which were to have been purchased:

FIRST: Moneys deposited in the Remarketing Proceeds Account for the Bonds of the applicable Series; and

SECOND: Moneys deposited in the Issuer Purchase Account for the Bonds of the applicable Series.

Any moneys held by the Trustee in the Issuer Purchase Account remaining unclaimed by the Owners of the Purchased Bonds which were to have been purchased for two years after the respective Purchase Date for such Bonds shall be paid to the Issuer, upon a request in a Written Direction of the Issuer against written receipt therefor. The Owners of Purchased Bonds who have not yet claimed money in respect of such Bonds shall thereafter be entitled to look only to the Trustee, to the extent it shall hold moneys on deposit in the Bond Purchase Fund, or the Issuer to the extent moneys have been transferred in accordance with this Section 4.15(e). The Trustee shall have no obligation to advance its own funds to fund the Bond Purchase Fund or otherwise pay the Purchase Price on any Bonds.

(f) *Delivery of Purchased Bonds.* (i) The Remarketing Agent shall give notice by Electronic Means to the Trustee on each date on which Bonds shall have been purchased pursuant to Section 4.11, Section 4.12, Section 4.13, or Section 4.14, specifying the principal amount of such Bonds, if any, sold by it and a list of such purchasers showing the names and Authorized Denominations in which such Bonds shall be registered, and the addresses and social security or taxpayer identification numbers of such purchasers. By 12:30 p.m., New York City time, on the Purchase Date, a principal amount of Bonds equal to the amount of Purchased Bonds purchased with moneys from the Remarketing Proceeds Account shall be made available by the Trustee to the Remarketing Agent against payment therefor in immediately available funds. The Trustee shall prepare each Bond to be so delivered in such names as directed by the Remarketing Agent pursuant to paragraph (c)(ii) of this Section 4.15.

(ii) A principal amount of Bonds equal to the amount of Purchased Bonds purchased from moneys on deposit in the Issuer Purchase Account shall be delivered on the day of such purchase by the Trustee to or as directed by the Issuer. The Trustee shall register such Bonds in the name of the Issuer or as otherwise directed by the Issuer.

Section 4.16 Notice of Mandatory Tender for Purchase. In connection with any mandatory tender for purchase of Bonds in accordance with Section 4.12, Section 4.13 or Section 4.14, the Trustee shall give the notice (which in the case of a mandatory tender pursuant to Section 4.14 shall be given as a part of the notice given pursuant to Section 2.6(c), Section 2.7(c), Section 2.8(c) or Section 2.9(c)) stating: (a) that the Purchase Price of any Bond so subject to mandatory tender for purchase shall be payable only upon surrender of such Bond to the Trustee at its designated corporate trust office, accompanied by an instrument of transfer thereof in form satisfactory to the Trustee, executed in blank by the Owner thereof or by the Owner's duly-authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange; (b) that all Bonds so subject to

mandatory tender for purchase shall be purchased on the Mandatory Purchase Date unless (i) a Failed Remarketing shall have occurred prior to a Mandatory Purchase Date occurring at the end of any Interest Rate Period, in which case such Bonds shall be redeemed pursuant to Section 4.1 rather than purchased on such Mandatory Purchase Date, or (ii) such Bonds shall have otherwise been redeemed on or prior to, or are not Outstanding as of, such Mandatory Purchase Date; and (c) that in the event that any Owner of a Bond so subject to mandatory tender for purchase shall not surrender such Bond to the Trustee for purchase on such Mandatory Purchase Date, then such Bond shall be deemed to be an Undelivered Bond, and that no interest shall accrue thereon on and after such Mandatory Purchase Date and that the Owner thereof shall have no rights under this Indenture other than to receive payment of the Purchase Price thereof. Any such notice of a mandatory tender of Bonds pursuant to Section 4.12, Section 4.13 or Section 4.14 shall be given no less than 30 days prior to the applicable Mandatory Purchase Date, and in addition, the Trustee shall give a conditional notice of extraordinary redemption pursuant to Section 4.4 no later than the applicable deadlines set forth in that Section to provide for the extraordinary redemption of the Bonds in the event that a Failed Remarketing occurs prior to the Mandatory Purchase Date. No later than five (5) Business Days prior to the date on which such conditional notice of extraordinary redemption is required to be given by the Trustee pursuant to Section 4.4, the Issuer shall direct the Trustee to send such conditional redemption notice pursuant to a Written Direction in the form attached hereto as Exhibit E, which Written Direction shall include the applicable Redemption Date and method(s) for calculating the Redemption Price, to be followed by notice of the Redemption Price, as provided in Exhibit E.

Section 4.17 Irrevocable Notice Deemed to Be Tender of Bond; Undelivered Bonds. (a) The giving of notice by an Owner of a Bond bearing interest at a Daily Interest Rate or a Weekly Interest Rate pursuant to Section 4.11 shall constitute the irrevocable tender for purchase of each such Bond with respect to which such notice shall have been given, regardless of whether such Bond is delivered to the Trustee for purchase on the relevant Purchase Date as provided in this Article IV.

(b) The Trustee may refuse to accept delivery of any Purchased Bonds for which a proper instrument of transfer, with a satisfactory guaranty of signature, has not been provided; such refusal, however, shall not affect the validity of the purchase of such Bond as herein described. For purposes of this Article IV, the Trustee for the Bonds shall determine timely and proper delivery of Purchased Bonds and the proper endorsement of such Bonds. Such determination shall be binding on the Owners of such Bonds, the Issuer and the Remarketing Agent, absent manifest error. If any Owner of a Bond who shall have given notice of tender of purchase pursuant to Section 4.11 or any Owner of a Bond subject to mandatory tender for purchase pursuant to Section 4.12, Section 4.13 or Section 4.14 shall fail to deliver such Bond to the Trustee at the place and on the applicable date and at the time specified, or shall fail to deliver such Bond properly endorsed, such Bond shall constitute an Undelivered Bond. If funds in the amount of the Purchase Price of the Undelivered Bond are available for payment to the Owner thereof on the date and at the time specified, from and after the date and time of that required delivery, (i) the Undelivered Bond shall be deemed to be purchased and shall no longer be deemed to be Outstanding under this Indenture; (ii) interest shall no longer accrue thereon; and (iii) funds in the amount of the Purchase Price of the Undelivered Bond shall be held by the Trustee for such Bond for the benefit of the Owner thereof, to be paid on delivery (and proper endorsement) of the Undelivered Bond to the

Trustee at its designated corporate trust office. Any funds held by the Trustee as described in clause (iii) of the preceding sentence shall be held uninvested.

Section 4.18 Remarketing of Bonds; Notice of Interest Rates. (a) Upon a mandatory tender or notice of the tender for purchase of Bonds, the Remarketing Agent shall offer for sale and use its best efforts to sell such Bonds subject to conditions in the Remarketing Agreement, any such sale to be made on the Purchase Date in accordance with this Article IV at a price equal to the principal amount thereof plus accrued interest, if any, thereon to the Purchase Date. The Remarketing Agent agrees that it shall not sell any Bonds purchased pursuant to this Article IV to the Issuer or the Project Participant, or to any Person who controls, is controlled by, or is under common control with the Issuer or the Project Participant.

(b) The Remarketing Agent shall determine the rate of interest to be borne by the Bonds bearing interest at a Daily Interest Rate, Weekly Interest Rate, CP Interest Term Rates or a Fixed Rate and the CP Interest Terms for each Bond during each Commercial Paper Interest Rate Period, and the Calculation Agent shall determine the rate of interest to be borne by each Series of Bonds bearing interest at an Index Rate, all as provided in Article II, and shall furnish to the Trustee and to the Issuer upon request, in a timely fashion by Electronic Means, each rate of interest and CP Interest Term so determined.

(c) Anything in this Indenture to the contrary notwithstanding, if there shall have occurred and is continuing an Event of Default, there shall be no remarketing of Bonds tendered or deemed tendered for purchase.

Section 4.19 The Remarketing Agent. (a) The Remarketing Agent shall be authorized by law to perform all the duties imposed upon it pursuant to the Remarketing Agreement. The Remarketing Agent or any successor shall signify its acceptance of the duties and obligations imposed upon it pursuant to the Remarketing Agreement by an agreement under which the Remarketing Agent will agree to:

(i) determine the interest rates applicable to the Bonds of the applicable Series and give notice to the Trustee of such rates and periods in accordance with Article II;

(ii) keep such books and records as shall be consistent with prudent industry practice; and

(iii) use its best efforts to remarket Bonds in accordance with the Remarketing Agreement.

(b) The Remarketing Agent shall hold all amounts received by it in accordance with any remarketing of Bonds in trust only for the benefit of the Owners of tendered Bonds and shall not commingle such amounts with any other moneys.

Section 4.20 Qualifications of Remarketing Agent; Resignation; Removal. (a) Each Remarketing Agent shall be a member of the National Association of Securities Dealers, having a combined capital stock, surplus and undivided profits of at least \$50,000,000 and be authorized by

law to perform all the duties imposed upon it by this Indenture. Any successor Remarketing Agent shall have senior unsecured long-term debt which shall be rated by each Rating Agency.

(b) A Remarketing Agent may at any time resign and be discharged of the duties and obligations created by the Remarketing Agreement by giving notice to the Trustee and the Issuer. No such resignation or removal shall be effective until a successor has been appointed and has accepted such duties. A Remarketing Agent may be removed at the direction of the Issuer at any time on 30 days' prior written notice, in a Written Direction of the Issuer, filed with such Remarketing Agent for the related Series of Bonds and the Trustee.

Section 4.21 Successor Remarketing Agents. (a) Any corporation, association, partnership or firm which succeeds to the business of the Remarketing Agent as a whole or substantially as a whole, whether by sale, merger, consolidation or otherwise, shall thereby become vested with all the property, rights and powers of such Remarketing Agent hereunder.

(b) In the event that the Remarketing Agent has given notice of resignation or has been notified of its impending removal in accordance with Section 4.20(b), the Issuer shall appoint a successor Remarketing Agent.

(c) In the event that the property or affairs of the Remarketing Agent shall be taken under control of any state or federal court or administrative body because of bankruptcy or insolvency, or for any other reason, and the Issuer shall not have appointed its successor, the Issuer shall appoint a successor and, if no appointment is made within thirty (30) days, the Trustee shall apply to a court of competent jurisdiction for such appointment.

Section 4.22 Tender Agent. The Trustee shall serve as the tender agent for any Series of Bonds for which optional or mandatory tender for purchase is applicable under this Article IV, and as tender agent it and each successor Trustee appointed in accordance with this Indenture shall:

(a) hold all Bonds delivered to it for purchase hereunder in trust for the exclusive benefit of the respective Owners that shall have so delivered such Bonds until moneys representing the Purchase Price of such Bonds shall have been delivered to or for the account of or to the order of such Owners;

(b) hold all moneys delivered to it hereunder for the purchase of Bonds in trust for the exclusive benefit of the Person that shall have so delivered such moneys until the Bonds purchased with such moneys shall have been delivered to it for the account of such Person and, thereafter, for the benefit of the Owners tendering such Bonds; and

(c) keep such books and records as shall be consistent with prudent industry practice and make such books and records available for inspection at all times during regular business hours (upon reasonable prior written notice of inspection) by the Issuer and the Remarketing Agent for such Series of Bonds.

ARTICLE V

ESTABLISHMENT OF FUNDS AND APPLICATION THEREOF

Section 5.1 The Pledge Effected by this Indenture. (a) The Bonds and the Interest Rate Swap are special obligations of the Issuer payable solely from and secured as to the payment of the principal and Redemption Price thereof, and interest thereon, in accordance with their terms and the provisions of this Indenture solely by the Trust Estate. Pursuant to the Granting Clauses of this Indenture, the Trust Estate has been conveyed, assigned and pledged to the payment of the principal and Redemption Price of and interest on the Bonds and the Interest Rate Swap in accordance with their terms, and any other senior, parity and subordinate obligations of the Issuer secured by the lien of this Indenture, subject to (i) the pledge of and lien on the Commodity Swap Reserve Account in favor of the Commodity Swap Counterparty, and (ii) the provisions of this Indenture permitting the application thereof for the purposes and on the terms and conditions set forth in this Indenture. The Trust Estate thereby pledged and assigned shall immediately be subject to the lien of such pledge without any further physical delivery thereof or other further act, and the lien of such pledge shall be a first lien and shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the Issuer, irrespective of whether such parties have notice thereof.

(b) Neither the Bonds nor the Interest Rate Swap constitute general obligations or indebtedness of the Issuer, the Commission, any political subdivision, municipality, city or town of the State or the Project Participant within the meaning of the Constitution or statutes of the State. The Bonds are special, limited obligations of the Issuer payable solely from and secured by a lien on the Trust Estate, in the manner and to the extent provided for in this Indenture. Neither the Bondholders nor any Interest Rate Swap Counterparty shall ever have the right to require or compel the exercise of the ad valorem taxing power of the State or any political subdivision thereof, or the taxation in any form on any real or personal property to pay the principal or Redemption Price of or interest on the Bonds or the amounts payable by the Issuer under the Interest Rate Swap. Neither the full faith and credit nor the taxing power of the State, any political subdivision, municipality, city or town of the State, or the Project Participant is pledged to the payment of the principal of, redemption premium, if any, or interest on the Bonds or the amounts payable by the Issuer under the Interest Rate Swap. The Issuer has no taxing power.

(c) Nothing contained in this Indenture shall be construed to prevent the Issuer from acquiring, constructing or financing, through the issuance of its bonds, notes or other evidences of indebtedness, any facilities or supplies of natural gas or electricity other than the Commodity Project; provided that such bonds, notes or other evidences of indebtedness shall not be payable out of or secured by the Trust Estate or any portion thereof, and neither the cost of such facilities or supplies of natural gas or electricity nor any expenditure in connection therewith or with the financing thereof shall be payable from the Trust Estate or any portion thereof.

Section 5.2 Establishment of Funds and Accounts. (a) The following Funds and Accounts are hereby established, each of which shall be held by the Trustee:

- (i) Project Fund, consisting of the Acquisition Account and the Commodity Swap Reserve Account,
- (ii) Revenue Fund,
- (iii) Operating Fund,
- (iv) Debt Service Fund, consisting of the Debt Service Account, the Redemption Account and the Debt Service Reserve Account,
- (v) General Fund,
- (vi) Commodity Remarketing Reserve Fund,
- (vii) Assignment Payment Fund,
- (viii) Bond Purchase Fund established pursuant to Section 4.15, consisting of the Issuer Purchase Account and the Remarketing Proceeds Account,
- (ix) Swap Termination Account, and
- (x) Investment Agreement Breakage Account.

(b) Within the Funds and Accounts established hereunder and held by the Trustee, the Trustee may create additional Accounts in any Fund or subaccounts in any Accounts as may facilitate the administration of this Indenture. The Issuer may, by Supplemental Indenture, with the prior written approval of the Trustee, establish one or more additional accounts or subaccounts. By Supplemental Indenture, the Issuer may also (i) establish custodial accounts to be held by the Trustee as custodian to receive Revenues paid by the Project Participant under the Commodity Supply Contract, and (ii) provide for the application of such amounts for transfer to the Revenue Fund and for such other purposes as may be specified therein.

Section 5.3 Project Fund. (a) There shall be established within the Project Fund an Acquisition Account, into which the Trustee shall deposit proceeds of the Bonds in the amount specified in Section 2.1(b), and there may be paid into the Acquisition Account, at the option of the Issuer, any moneys received for or in connection with the Commodity Project by the Issuer from any other source, unless required to be otherwise applied as provided by this Indenture. Upon delivery of the Bonds, the Trustee shall immediately transfer from the Acquisition Account to the Debt Service Account the amount, specified by Written Request of the Issuer, representing capitalized interest on the Bonds to the date set forth in such Written Request. Except as otherwise provided in this Section 5.3, amounts in Acquisition Account shall be applied by the Issuer to pay the Cost of Acquisition and any capitalized interest on the Series 2024 Bonds.

(b) There shall be established within the Project Fund a Commodity Swap Reserve Account, into which the Trustee shall deposit proceeds of the Bonds in an amount equal to the Minimum Amount. Amounts credited to the Commodity Swap Reserve Account shall be applied

by the Trustee to the payment of Commodity Swap Payments in the event the amounts on deposit in the Operating Fund are not sufficient to make such payments; *provided that* (i) in the event that the amount on deposit in the Commodity Swap Reserve Account is not sufficient to pay the Commodity Swap Payments due in any Month, the amount available in the Commodity Swap Reserve Account shall be applied pro rata to the payment of the amounts due under the Issuer Commodity Swap then in effect, (ii) any amounts in the Commodity Swap Reserve Account in excess of the Minimum Amount shall be transferred by the Trustee to the Revenue Fund, and (iii) any amounts remaining on deposit in the Commodity Swap Reserve Account on the final date for payment of the principal of the Bonds, whether upon maturity, redemption or acceleration, shall be applied to make such payment. Allocation of the sources and uses of amounts on deposit from time to time in the Commodity Swap Reserve Account shall be made in accordance with the Tax Agreement.

(c) In the event that, on or before the 23rd day of the Month, or if the 23rd day is not a Business Day, the prior preceding Business Day, and prior to the transfer in any month into the Operating Fund pursuant to Section 5.5(a)(i), the Trustee determines that after taking into account amounts to be transferred into the Operating Fund pursuant to Section 5.5(a)(i), there is a Swap Payment Deficiency, the Trustee on behalf of the Issuer shall prepare and deliver to the Commodity Supplier a Call Receivables Offer pursuant to Section 2.2(a) of the Receivables Purchase Provisions. If the Commodity Supplier elects to purchase Call Receivables pursuant to such Call Receivables Offer, which election shall not be later than the Business Day following receipt by the Commodity Supplier of the Call Receivables Offer, the Commodity Supplier shall deliver to the Trustee the Call Option Notice setting forth the purchase date, which shall not be later than the Payment Date (as defined in the Confirmation to the Issuer Commodity Swap) for the Month in which the Commodity Supplier receives the Call Receivables Offer. The Trustee is hereby authorized to sell the Call Receivables then owed by the Project Participant under the Commodity Supply Contract pursuant to the Receivables Purchase Provisions (as contemplated by this Section) and to take all actions on its part necessary in connection therewith. If the Commodity Supplier elects to purchase such Call Receivables, all amounts received by the Trustee pursuant to the Receivables Purchase Provisions in respect of Call Receivables purchased pursuant to this Section 5.3(c) shall be deposited in the Commodity Swap Reserve Account and applied to payment of Commodity Swap Payments.

(d) Within one Business Day after the Commodity Supplier delivers a Call Option Notice or is deemed not to have exercised its right to purchase Call Receivables pursuant to the last sentence of Section 2.2(b) of the Receivables Purchase Provisions, the Trustee shall deliver written notice to the Commodity Swap Counterparty indicating whether the Commodity Supplier has elected to purchase Call Receivables pursuant to the Call Receivables Offer sufficient to increase the balance in Commodity Swap Reserve Account to an amount sufficient to pay the next succeeding Commodity Swap Payment.

(e) The Trustee shall deliver to the Custodian pursuant to the Custodial Agreements, written notice as follows: (i) on any Business Day on which the Trustee delivers a Call Receivables Offer to the Commodity Supplier pursuant to Section 2.2(a) of the Receivables Purchase Provisions, written notice that a Swap Payment Deficiency exists and the amount of such Swap Payment Deficiency; (ii) on any Business Day on which the Commodity Supplier is required

to make an election to purchase Call Receivables pursuant to Section 2.2(b) of the Receivables Purchase Provisions, written notice as to whether the Commodity Supplier has elected to purchase such Call Receivables and, if so, the purchase date of such Call Receivables; and (iii) if the Commodity Supplier has elected to purchase Call Receivables, on the purchase date thereof written notice that the purchase price has been received by the Trustee in immediately available funds; provided that, in addition to the foregoing, the Trustee shall deliver written notice to the Custodian if any Swap Payment Deficiency is otherwise cured on the date that such Swap Payment Deficiency is cured.

(f) Before any payment is made by the Trustee from the Acquisition Account, the Issuer shall file with the Trustee a Written Request of the Issuer, showing with respect to each payment to be made, the name of the Person to whom payment is due and the amount to be paid, and stating that the obligation to be paid was incurred and is a proper charge against the Project Fund (or the Acquisition Account therein). To the extent that the Written Request includes amounts to be paid pursuant to the Commodity Purchase Agreement, copies of the invoices or requests for direct payments submitted under the Commodity Purchase Agreement shall be attached to the Written Request. Each such Written Request shall be sufficient evidence to the Trustee: (i) that obligations in the stated amounts have been incurred by the Issuer and that each item thereof is a proper charge against the Project Fund or Acquisition Account therein; and (ii) that there has not been filed with or served upon the Issuer notice of any lien, right to lien or attachment upon, or claim affecting the right to receive payment of, any of the moneys payable to any of the Persons named in such Written Request which has not been released or will not be released simultaneously with the payment of such obligation other than materialmen's or mechanics' liens accruing by mere operation of law.

(g) Upon receipt of each such Written Request, the Trustee shall pay the amounts set forth therein as directed by the terms thereof.

(h) Notwithstanding any of the other provisions of this Section 5.3, to the extent that other moneys are not available therefor, amounts in Acquisition Account shall be applied to the payment of principal of and interest on Bonds when due.

(i) Upon Written Direction of the Issuer, but not earlier than six (6) months after the date of delivery of the Bonds, the Trustee shall transfer to the Revenue Fund any amounts remaining on deposit in Acquisition Account of the Project Fund.

Section 5.4 Revenues and Revenue Fund; Deposits of Other Amounts. (a) All Revenues shall be deposited promptly by the Trustee upon receipt thereof into the Revenue Fund.

(b) The following amounts, which are payable to the Trustee but do not constitute Revenues, shall be applied by the Trustee as follows:

(i) any Termination Payment shall be deposited directly into the Redemption Account of the Debt Service Fund as provided in Section 5.8;

(ii) any Assignment Payment shall be deposited directly into the Assignment Payment Fund as provided in Section 5.13;

(iii) amounts received from the Commodity Supplier under the Receivables Purchase Provisions shall be deposited by the Trustee into the Debt Service Account, the Commodity Swap Reserve Account or the Redemption Account as provided herein;

(iv) any Interest Rate Swap Receipts shall be deposited directly into the Debt Service Account as provided in Section 2.13;

(v) any Seller Swap MTM Payment shall be deposited into the Swap Termination Account and applied as provided in Section 5.10(a);

(vi) any amounts required by Section 5.12 to be deposited into the Commodity Remarketing Reserve Fund shall be deposited directly therein;

(vii) any Additional Termination Payment shall be paid to, or upon Written Instructions provided by, the Issuer;

(viii) Ledger Amount Payments received from the Commodity Supplier pursuant to Section 17.2 of the Commodity Purchase Agreement shall be deposited directly into the Debt Service Account; and

(ix) any Investment Agreement Breakage Amount payable to the Issuer shall be deposited into the Investment Agreement Breakage Account and applied as provided in Section 5.10(b).

Section 5.5 Payments from Revenue Fund. (a) In each Month during which there is a deposit of Revenues into the Revenue Fund (but in no case later than the respective dates set forth below), the Trustee shall apply the amounts on deposit in the Revenue Fund, to the extent available, for credit or deposit to the Funds and Accounts indicated below, in the amounts described below (such application to be made in such a manner so as to assure good funds are available on the respective dates set forth below) in the following order of priority:

(i) To the Operating Fund, not later than the 25th day of such Month, the amount, if any, required so that the balance therein shall equal the amount estimated to be necessary for the payment of Commodity Swap Payments coming due for such Month and other Operating Expenses coming due for the following Month (but no such payments or expenses for any prior Month); *provided that*, in the event that the amount on deposit in the Operating Fund is not sufficient to pay the Commodity Swap Payments due in any Month, the amount available therein shall be applied to the payment of the amounts due under the Issuer Commodity Swap then in effect;

(ii) To the Debt Service Fund, not later than the last Business Day of such Month for the credit to the Debt Service Account an amount equal to the greater of (A) the Scheduled Debt Service Deposit, as set forth in Schedule II hereto, or (B) the amount necessary to cause the cumulative Scheduled Debt Service Deposits to be on deposit therein (without credit for undisbursed Interest Rate Swap Receipts on deposit therein);

(iii) To the Commodity Swap Reserve Account in the Project Fund, not later than the last Business Day of such Month, the amount, if any, required so that the balance in the Commodity Swap Reserve Account is at least equal to the Minimum Amount;

(iv) To the Debt Service Fund, not later than the last Business Day of such Month, for deposit in the Debt Service Reserve Account, the amount, if any, required so that the balance in such Debt Service Reserve Account shall equal the Debt Service Reserve Requirement related thereto as of the last day of the then current Month; and

(v) To the Commodity Supplier, not later than the last Business Day of such Month, the amount, if any, required for the repurchase of Receivables and the payment of interest on all Receivables sold to the Commodity Supplier pursuant to the Receivables Purchase Provisions.

(b) If, after a scheduled monthly deposit to the Debt Service Account, the balance therein is below the cumulative Scheduled Debt Service Deposits for such month as specified on Schedule II, the Trustee shall immediately notify the Issuer of such deficiency and the Trustee shall (i) if the Project Participant is in default under the Commodity Supply Contract and the Issuer has not previously done so, cause the Issuer to suspend all deliveries of all quantities of natural gas or electricity to such Project Participant, and (ii) promptly give notice to the Commodity Supplier to follow the provisions set forth in the Commodity Remarketing Exhibit to the Commodity Purchase Agreement.

(c) In each Month during which (i) there is a deposit of Revenues into the Revenue Fund and (ii) payment of a Principal Installment is due, after making such transfers, credits and deposits as required by paragraph (a) above and after the applicable Principal Installment payment date, the Trustee shall credit to the General Fund the remaining balance in the Revenue Fund.

(d) On each _____ 1, beginning _____ 1, 20__, after making such transfers, credits and deposits as required by paragraph (a) above, the Trustee shall credit to the General Fund the remaining balance in the Revenue Fund.

(e) So long as there shall be held in the Debt Service Fund an amount sufficient to pay in full all Outstanding Bonds and Interest Rate Swap Payments in accordance with their terms (including principal or applicable sinking fund Redemption Price and interest thereon), no transfers shall be required to be made to the Debt Service Fund.

Section 5.6 Operating Fund. (a) Amounts credited to the Operating Fund shall be applied from time to time by the Trustee to the payment of (i) first, Rebate Payments, (ii) second, Commodity Swap Payments and (iii) third, any other Operating Expenses then due and payable.

(b) Amounts credited to the Operating Fund that the Trustee, on the last Business Day of each Month, determines to be in excess of the requirements of such Fund for such Month, shall be applied to make up any deficiencies first in the Debt Service Account, then in the Commodity Swap Reserve Account and then in the Debt Service Reserve Account. Any balance of such excess

not required to be so applied shall be transferred to the Revenue Fund for application in accordance with Section 5.5(a).

Section 5.7 Debt Service Fund – Debt Service Account. (a) The amounts deposited into the Debt Service Account pursuant to Section 2.13(a)(iii), Section 5.4(b)(viii) and Section 5.5(a)(ii) shall be held in such Account and applied to the payment of the Debt Service and Interest Rate Swap Payments payable on each Bond Payment Date.

(b) The Trustee shall pay out of the Debt Service Account to the Paying Agent: (i) on or before each Interest Payment Date, the amount required for the interest on the Bonds payable on such date; (ii) on or before each Bond Payment Date, the Interest Rate Swap Payments then due; (iii) on or before the Bond Payment Date on which a Principal Installment is due, the amount required for the Principal Installment payable on such date; and (iv) on or before any redemption date, the amount required for the payment of the Redemption Price of and accrued interest on such Bonds then to be redeemed; provided, however, that if with respect to any Bonds or portions thereof the amounts due on any such Bond Payment Date and/or redemption date are intended to be paid from a source other than amounts in the Debt Service Account prior to any application of amounts in the Debt Service Account to such payments, then the Trustee (after written notice from the Issuer to the Trustee that the Issuer intends to make payments from a source other than amounts in the Debt Service Account, which notice identifies such source and the agreement governing reimbursement for such payments) shall not pay any such amounts to the Paying Agent until such amounts have failed to be provided from such other source at the time required and if any such amounts due are paid from such other source the Trustee shall apply the amounts in the Debt Service Account to provide reimbursement for such payment from such other source as provided in the agreement governing reimbursement of such amounts to such other source. Such amounts shall be applied by the Paying Agent on and after the due dates thereof. The Trustee shall also pay out of the Debt Service Account the accrued interest included in the purchase price of Bonds purchased for retirement.

(c) Amounts accumulated in the Debt Service Account with respect to any Sinking Fund Installment (together with amounts accumulated therein with respect to interest on the Bonds for which such Sinking Fund Installment was established) shall, if so directed by the Issuer in a Written Request delivered not less than 30 days before the due date of such Sinking Fund Installment, be applied by the Trustee to (i) the purchase of Bonds of the maturity for which such Sinking Fund Installment was established, (ii) the redemption at the applicable sinking fund Redemption Price of such Bonds, if then redeemable by their terms, or (iii) any combination of (i) and (ii). All purchases of any Bonds pursuant to this subsection (c) shall be made at prices not exceeding the applicable sinking fund Redemption Price of such Bonds plus accrued interest, and such purchases shall be made in such manner as the Issuer shall direct the Trustee. The applicable sinking fund Redemption Price (or principal amount of maturing Bonds) of any Bonds so purchased or redeemed shall be deemed to constitute part of the Debt Service Account until such Sinking Fund Installment date, for the purpose of calculating the amount of such Account. As soon as practicable after the 30th day preceding the due date of any such Sinking Fund Installment, the Trustee shall proceed to call for the redemption on such due date, by giving notice as required by this Indenture, Bonds of the maturity for which such Sinking Fund Installment was established (except in the case of Bonds maturing on a Sinking Fund Installment date) in such amount as shall

be necessary to complete the retirement of the unsatisfied balance of such Sinking Fund Installment after making allowance for any Bonds purchased or redeemed pursuant to Section 5.11 which the Issuer has directed the Trustee to apply as a credit against such Sinking Fund Installment as provided in Section 5.11(c). The Trustee shall pay out of the Debt Service Account to the Paying Agent, on or before such redemption date (or maturity date), the amount required for the redemption of the Bonds so called for redemption (or for the payment of such Bonds then maturing), and such amount shall be applied by such Paying Agents to such redemption (or payment). All expenses in connection with the purchase or redemption of Bonds shall be paid by the Issuer from the Operating Fund.

All Bonds paid or redeemed, either at or before maturity, shall be delivered to the Trustee at its designated corporate trust office when such payment or redemption is made, and such Bonds, together with all Bonds purchased or redeemed pursuant to Section 5.11 that have been delivered to the Trustee for application as a credit against Sinking Fund Installments and all Bonds purchased by the Trustee, shall thereupon be promptly cancelled (or deemed to have been cancelled).

(d) Amounts accumulated in the Debt Service Account with respect to any principal amount of Bonds due on a certain future date for which no Sinking Fund Installments have been established (together with amounts accumulated therein with respect to interest on such Bonds) shall be applied by the Trustee, upon the Written Direction of the Issuer, on or prior to the due date thereof, to (i) the purchase of such Bonds or (ii) the redemption at the principal amount of such Bonds, if then redeemable by their terms. All purchases of any Bonds pursuant to this subsection (d) shall be made at prices not exceeding the principal amount of such Bonds plus accrued interest, and such purchases shall be made in such manner as the Issuer shall determine. The principal amount of any Bonds so purchased or redeemed shall be deemed to constitute part of the Debt Service Account until such due date, for the purpose of calculating the amount of such Account.

(e) The amount deposited in the Debt Service Account on the Issue Date of any Series of Bonds shall be set aside and applied to the payment of interest on the Bonds and any Interest Rate Swap Payments.

(f) In the event of the refunding or defeasance of any Bonds, the Trustee shall, if directed by the Issuer in writing, withdraw from the Debt Service Account all, or any portion of, the amounts accumulated therein with respect to Debt Service on the Bonds being refunded or defeased and deposit such amounts with the Trustee to be held for the payment of the principal or Redemption Price, if applicable, and interest on the Bonds being refunded or defeased; provided that such withdrawal shall not be made unless immediately thereafter Bonds being refunded or defeased shall be deemed to have been paid pursuant to Section 12.1(b). In the event of such refunding or defeasance, the Issuer may direct the Trustee to withdraw from the Debt Service Account all, or any portion of, the amounts accumulated therein with respect to Debt Service on the Bonds being refunded or defeased and deposit such amounts in any Fund or Account hereunder; provided, however, that such withdrawal shall not be made unless the Bonds being defeased shall be deemed to have been paid pursuant to Section 12.1(b) and provided, further, that, at the time of such withdrawal, there shall exist no deficiency in any Fund or Account held hereunder.

(g) Any amount remaining in the Debt Service Account after a date for payment of a Principal Installment that is in excess of a Cumulative Scheduled Balance as shown on Schedule II shall, to the extent not required to be retained therein for purposes of making future payments as shown on Schedule II, be deposited in the Revenue Fund.

(h) In the event that, on the second Business Day preceding the Final Maturity Date of the Bonds, the Trustee determines that (i) the balance in the Commodity Swap Reserve Account is less than the Minimum Amount, and/or (ii) the balance in the Debt Service Reserve Account is less than the Debt Service Reserve Requirement due to non-payments by the Project Participant and sufficient funds will not be available to pay the principal of and interest on the Bonds coming due on such Final Maturity Date, the Trustee shall prepare and deliver to the Commodity Supplier and the SPE Custodian the Put Option Notice pursuant to Section 2.1(b) of the Receivables Purchase Provisions with respect to Put Receivables, provided that the amount of Put Receivables sold pursuant to the Receivables Purchase Provisions shall not be in excess of the aggregate amount required, when taking into account other available funds under this Indenture, to (iii) restore the balance in the Commodity Swap Reserve Account to an amount equal to the Minimum Amount, and (iv) pay the maturing principal amount of and interest on the Bonds in full. On or before two Business Days next preceding such Final Maturity Date, the Trustee shall deliver to the Commodity Supplier the bill of sale and certificates required by Section 2.3(a) of the Receivables Purchase Provisions. The Trustee is hereby authorized to sell any Put Receivables then owed by the Project Participant under the Commodity Supply Contract pursuant to the Receivables Purchase Provisions (as contemplated by this Section) and to take all actions on its part necessary in connection therewith. All amounts received by the Trustee pursuant to the Receivables Purchase Provisions in respect of Put Receivables sold pursuant to this Section 5.7(h) to fund amounts then due under the Issuer Commodity Swap shall be deposited in the Commodity Swap Reserve Account, and all amounts received by the Trustee pursuant to the Receivables Purchase Provisions in respect of Put Receivables sold pursuant to this Section 5.7(h) to fund Debt Service shall be deposited in the Debt Service Account and applied to payment of principal of and interest on the Bonds on the Final Maturity Date.

(i) At all times, the Issuer shall cause all amounts on deposit under the SPE Master Custodial Agreement in the Prepay LLC Put Receivables Account (as defined in the SPE Master Custodial Agreement) to be invested in Qualified Investments that mature or are payable not later than such times as shall be necessary to provide moneys when needed for payments to be made from the Prepay LLC Put Receivables Account. Consistent with the requirements for Qualified Investments as set forth immediately above, the Issuer shall cause all such amounts on deposit in the Prepay LLC Put Receivables Account to be invested in either (i) money market funds meeting the requirements of paragraph (h) under Qualified Investments or (ii) in any other Qualified Investment. To the extent any amounts become due from the Commodity Supplier in respect of any Put Receivables, the Trustee shall notify the SPE Custodian pursuant to the terms of the Receivables Purchase Provisions and the SPE Master Custodial Agreement of the amounts so due and the account where such amounts should be deposited such that those amounts will be paid directly from the Prepay LLC Put Receivables Account to the appropriate account under this Indenture.

Section 5.8 Debt Service Fund – Redemption Account. (a) In the event of an early termination of the Commodity Purchase Agreement and the establishment of an Early Termination Payment Date, the Issuer shall direct the Commodity Supplier to pay the Termination Payment directly to the Trustee for the account of the Issuer. The Trustee shall deposit the Termination Payment into the Redemption Account. Amounts deposited into the Redemption Account shall be applied by the Trustee to the redemption of Outstanding Bonds pursuant to Section 4.1.

(b) In the event that two Business Days next preceding the Early Termination Payment Date, the Trustee determines that (i) the balance in the Commodity Swap Reserve Account is less than the Minimum Amount, and/or (ii) the balance in the Debt Service Reserve Account is less than the Debt Service Reserve Requirement due to non-payments by the Project Participant and sufficient funds will not be available to pay the Redemption Price of and interest on the Bonds coming due on the redemption date of the Bonds (as established pursuant to Section 4.1), the Trustee shall prepare and deliver to the Commodity Supplier and the SPE Custodian the Put Option Notice pursuant to Section 2.1(a) of the Receivables Purchase Provisions with respect to Put Receivables, provided that the amount of Put Receivables sold pursuant to the Receivables Purchase Provisions shall not be in excess of the aggregate amount required, when taking into account other available funds under this Indenture, to restore the balance in the Commodity Swap Reserve Account to an amount equal to the Minimum Amount, and pay the maturing principal amount of and interest on the Bonds in full. On or before two Business Days next preceding the redemption date of the Bonds, the Trustee shall deliver to the Commodity Supplier the bill of sale and certificates required by Section 2.3(b) of the Receivables Purchase Provisions. The Trustee is hereby authorized to sell the Put Receivables then owed by the Project Participant under the Commodity Supply Contract pursuant to the Receivables Purchase Provisions (as contemplated by this Section) and to take all actions on its part necessary in connection therewith. All amounts received by the Trustee pursuant to the Receivables Purchase Provisions in respect of Put Receivables sold pursuant to this Section 5.8(b) to fund the redemption of the Bonds shall be deposited in the Redemption Account and applied to payment of the Redemption Price of and interest on the Bonds on the applicable redemption date. Amounts deposited into the Redemption Account shall be applied by the Trustee to the payment of the Redemption Price of and interest on the Bonds pursuant to Section 4.1.

(c) Any amounts remaining on deposit in the Redemption Account following the redemption and payment of all Outstanding Bonds shall be applied by the Trustee *first*, to pay any remaining amounts due under the Issuer Commodity Swap after the application of amounts on deposit in the Commodity Swap Reserve Account, *second*, to pay any amounts, including interest, due to the Commodity Supplier under the Receivables Purchase Provisions, and *third*, upon Written Direction of the Issuer to the Trustee, shall be transferred to the Revenue Fund.

(d) No Extraordinary Expenses shall be paid from the Redemption Account.

Section 5.9 Debt Service Fund – Debt Service Reserve Account. (a) There shall be deposited in the Debt Service Reserve Account, from proceeds of the Bonds, an amount equal to the Debt Service Reserve Requirement.

(b) No Commodity Swap Counterparty shall have any claim upon the amounts on deposit in the Debt Service Reserve Account and no Commodity Swap Payments or Extraordinary Expenses shall be made from the Debt Service Reserve Account.

(c) If the Project Participant fails to make a payment when due under the Commodity Supply Contract, the Trustee shall, not later than the next Business Day following such nonpayment, give notice to the Issuer of such default and the amount of the nonpayment. On the last Business Day of the Month, the Trustee shall withdraw from the Debt Service Reserve Account and deposit into the Debt Service Account an amount equal to any deficiency that exists therein as a result of such nonpayment.

(d) If, as a result of any draw on the Debt Service Reserve Account pursuant to Section 5.9(c) above, the amount on deposit in the Debt Service Reserve Account is less than the Debt Service Reserve Requirement then in effect, the Trustee and the Issuer shall take the actions required by Section 7.11(b).

(e) Whenever the moneys on deposit in the Debt Service Reserve Account shall exceed the Debt Service Reserve Requirement, such excess shall be transferred by the Trustee to the Revenue Fund.

(f) Whenever the amount in the Debt Service Reserve Account, together with the amounts in the Debt Service Account, are sufficient to pay in full all Outstanding Bonds in accordance with their terms (including the maximum amount of principal or applicable sinking fund Redemption Price and interest which could become payable thereon) and all amounts payable under the Interest Rate Swap in accordance with its terms, the funds on deposit in the Debt Service Reserve Account shall be transferred to the Debt Service Account and no further deposits shall be required to be made into the Debt Service Reserve Account. Prior to said transfer, all investments held in the Debt Service Reserve Account shall be liquidated to the extent necessary in order to provide for the timely payment of principal or Redemption Price, if applicable, and interest on the Bonds.

(g) In the event of the defeasance of any Bonds, the Trustee, if the Issuer so directs in writing, may withdraw from the Debt Service Reserve Account a pro rata portion of the amounts accumulated therein applicable to the Bonds being defeased and deposit such amounts with itself as Trustee for the Bonds being defeased to be held for the payment of the principal or Redemption Price, if applicable, and interest on the Bonds being defeased; *provided* that such withdrawal shall not be made unless immediately thereafter the Bonds being defeased shall be deemed to have been paid pursuant to Section 13.1(b). In the event of such defeasance, the Issuer may also direct the Trustee to withdraw from the Debt Service Reserve Account all or any portion of the amounts accumulated therein and deposit such amounts in any Fund or Account hereunder; *provided* that such withdrawal shall not be made unless the Bonds being defeased shall be deemed to have been paid pursuant to Section 12.1(b); and *provided further*, that, at the time of such withdrawal, there shall exist no deficiency in any Fund or Account held hereunder.

Section 5.10 Termination and Breakage Accounts. (a) The Trustee shall deposit any Seller Swap MTM Payment into the Swap Termination Account and immediately upon receipt

pay the same to the Commodity Supplier pursuant to Section 17.6 of the Commodity Purchase Agreement.

(b) The Trustee shall deposit any Investment Agreement Breakage Amount received from the Commodity Supplier pursuant to Section 17.4(g) of the Commodity Purchase Agreement into the Investment Agreement Breakage Account and immediately upon receipt pay the same to the provider of the Specified Investment Agreement. The Trustee shall deposit any Investment Agreement Breakage Amount received from the provider of the Specified Investment Agreement into the Investment Agreement Breakage Account and immediately upon receipt pay the same to the Commodity Supplier pursuant to Section 17.4(g) of the Commodity Purchase Agreement.

Section 5.11 General Fund. (a) The Trustee shall apply moneys on deposit in the General Fund in the following amounts and in the following order of priority: *first*, for deposit into the Debt Service Account, the amount necessary (or all moneys credited to the General Fund if less than the amount necessary) to make up any deficiencies in the deposits to said Account required by Section 5.5(a)(ii); *second*, for deposit into the Debt Service Reserve Account, the amount necessary to make up any deficiencies in the deposits to such Account pursuant to Section 5.5(a)(iv); *third*, to the credit of the Commodity Swap Reserve Account, the amount necessary to cause the Minimum Amount to be on deposit therein; *fourth*, to the payment of (i) any Operating Expenses then due and payable and for which other funds are not available under this Indenture and (ii) any amounts owed by the Issuer under the Commodity Supply Contract with respect to purchases of replacement gas or electricity by the Project Participant; and *fifth*, to the payment of any amounts then due and payable with respect to Put Receivables or Call Receivables.

(b) Amounts on deposit in the General Fund not required to meet a deficiency or make a deposit as provided in subsection (a) above shall be applied by the Trustee upon the Written Request of the Issuer to the following in the order listed below:

- (i) payment of Extraordinary Expenses;
- (ii) any fees owed pursuant to any Qualified Investments;
- (iii) annual refunds to the Project Participant pursuant to the Commodity Supply Contract;
- (iv) the purchase or redemption of Bonds and expenses in connection with the purchase or redemption of such Bonds or any reserves which the Issuer determines shall be required for such purposes;
- (v) any other lawful purpose of the Issuer under the Act;

provided, however, that, subject to the provisions of subsection (a) of this Section 5.10, amounts credited to the General Fund and required by this Indenture to be applied to the purchase or redemption of Bonds shall be applied to such purpose. There is hereby created a Working Capital Account of the General Fund that may be used for any of the purposes contemplated in this Section

5.11(b) at the Written Request of the Issuer. The Issuer may deposit funds that are not part of the Trust Estate into the Working Capital Account of the General Fund from time to time.

(c) If at any time Bonds of any maturity for which Sinking Fund Installments shall have been established are (i) purchased or redeemed other than pursuant to Section 5.7(d) or (ii) deemed to have been paid pursuant to Section 12.1(b) and, with respect to such Bonds which have been deemed paid, irrevocable written instructions have been given to the Trustee to redeem or purchase the same on or prior to the due date of the Sinking Fund Installment to be credited under this subsection (c), the Issuer may from time to time and at any time by Written Direction to the Trustee specify the portion, if any, of such Bonds so purchased, redeemed or deemed to have been paid and not previously applied as a credit against any Sinking Fund Installment which are to be credited against future Sinking Fund Installments. Such direction shall specify the amounts of such Bonds to be applied as a credit against each Sinking Fund Installment or Installments and the particular Sinking Fund Installment or Installments against which such Bonds are to be applied as a credit; *provided, however*, that none of such Bonds may be applied as a credit against a Sinking Fund Installment to become due less than 45 days after such notice is delivered to the Trustee. All such Bonds to be applied as a credit shall be surrendered to the Trustee for cancellation on or prior to the due date of the Sinking Fund Installment against which they are being applied as a credit. The portion of any such Sinking Fund Installment remaining after the deduction of any such amounts credited toward the same (or the original amount of any such Sinking Fund Installment if no such amounts shall have been credited toward the same) shall constitute the unsatisfied balance of such Sinking Fund Installment for the purpose of calculation of Sinking Fund Installments due on a future date.

Section 5.12 Commodity Remarketing Reserve Fund. There shall be established a Commodity Remarketing Reserve Fund. There shall be paid into the Commodity Remarketing Reserve Fund the amounts specified in Section 5(e) of the Commodity Remarketing Exhibit to the Commodity Purchase Agreement. In the case of a Remediation Remarketing (as defined in the Commodity Remarketing Exhibit to the Commodity Purchase Agreement) pursuant to Section 8 of the Commodity Remarketing Exhibit to the Commodity Purchase Agreement, amounts shall be released from the Commodity Remarketing Reserve Fund upon such remarketing and applied pursuant to a Written Direction of the Issuer as follows: (a) if the proceeds received by the Trustee from the remarketing equal or exceed the Remediation Remarketing Purchase Price, the portion of the Commodity Remarketing Reserve Fund allocable to such remarketing shall be transferred to the General Fund, and (b) if the proceeds received by the Trustee from the remarketing are less than the Remediation Remarketing Purchase Price, then (x) the portion of the Commodity Remarketing Reserve Fund allocable to such remarketing shall be used to make a payment to the Commodity Supplier in an amount equal to the excess of such Remediation Remarketing Purchase Price over such proceeds received by the Issuer from the remarketing, and (y) any remaining amounts shall be transferred to the General Fund. For purposes of this Section 5.12, the portion of the Commodity Remarketing Reserve Fund allocable to a remarketing shall consist of the product of (i) a fraction, the numerator of which is the purchase price of the gas electricity to be remarketed, and the denominator of which is the aggregate amount previously received by the Issuer from any sale of such gas or electricity in a Non-Private Business Sale (as defined in the Commodity Remarketing Exhibit to the Commodity Purchase Agreement) or Private Business Sale (as defined in the Commodity Remarketing Exhibit to the Commodity Purchase Agreement)

that, as of the time of the remarketing, has not been remediated in accordance with Section 8 of the Commodity Remarketing Exhibit to the Commodity Purchase Agreement, multiplied by (ii) the balance of the Commodity Remarketing Reserve Fund at the time of the remarketing.

Section 5.13 Assignment Payment Fund. In connection with the issuance of Refunding Bonds, any Assignment Payment received from the Commodity Supplier shall be deposited into the Assignment Payment Fund to be transferred to the replacement commodity supplier, *provided, however,* that if the existing Bonds have not been redeemed or defeased on or before the Mandatory Purchase Date, in whole, by the Refunding Bonds, all or a portion of the Assignment Payment shall be transferred to the Redemption Account in Section 5.8, along with the proceeds of the Refunding Bonds, in order to redeem all of the Outstanding Bonds.

Section 5.14 Purchases of Bonds. Except as otherwise provided in Section 5.7, any purchase of Bonds (or portions thereof) by or at the direction of the Issuer pursuant to this Indenture may be made with or without tenders of Bonds and at either public or private sale, in such manner as the Issuer may determine.

ARTICLE VI

DEPOSITORIES OF MONEYS, SECURITY FOR DEPOSITS AND INVESTMENT OF FUNDS

Section 6.1 Depositories. (a) All moneys held by the Trustee under the provisions of this Indenture shall constitute trust funds and the Trustee may deposit such moneys with one or more Depositories in trust for the parties secured hereunder. All moneys deposited under the provisions of this Indenture with the Trustee or any Depository shall be held in trust and applied only in accordance with the provisions of this Indenture.

(b) Each Depository shall be a bank or trust company organized under the laws of any state of the United States or a national banking association having capital stock, surplus and undivided earnings of \$50,000,000 or more, and willing and able to accept the office on reasonable and customary terms and authorized by law to act in accordance with the provisions of this Indenture; provided, however, that the Trustee shall be entitled to rely, without verification, on any certificate of a bank, trust company, national banking association or other entity that certifies that it meets the requirements for being a Depository of moneys hereunder and shall not be responsible for any monitoring of such requirements after the initial deposit of any moneys pursuant to the provisions of this Indenture.

Section 6.2 Deposits. (a) All Revenues and moneys held by any Depository under this Indenture may be placed on demand or time deposit, if and as directed by the Issuer, *provided that* such deposits shall permit the moneys so held to be available for use at the time when needed. Any such deposit may be made in the commercial banking department of any Fiduciary, which may honor checks and drafts on such deposit with the same force and effect as if it were not such Fiduciary. All moneys held by any Fiduciary, as such, may be deposited by such Fiduciary in its banking department on demand or, if and to the extent directed by the Issuer and acceptable to such Fiduciary, on time deposit, *provided that* such moneys on deposit be available for use at the time when needed. Such Fiduciary shall allow and credit on such moneys such interest, if any, as

it customarily allows upon similar funds of similar size and under similar conditions or as required by law.

(b) All moneys held under this Indenture by the Trustee, the Issuer or any Depository shall be held in such manner as may then be required by applicable federal or State laws and regulations and applicable state laws and regulations of the state in which such Depository is located, regarding security for, or granting a preference in the case of, the deposit of public or trust funds or, in the absence of such laws and regulations, shall be either (i) continuously or fully insured by the Federal Deposit Insurance Corporation, or (ii) continuously and fully secured, to the extent not insured by the Federal Deposit Insurance Corporation, by lodging with the Trustee, as custodian, as collateral security, Qualified Investments having a market value (exclusive of accrued interest) not less than the amount of such moneys (or portion thereof not insured by the Federal Deposit Insurance Corporation); *provided, however*, that, to the extent permitted by law, it shall not be necessary for the Fiduciaries to give security under this subsection (b) for the deposit of any moneys with them held in trust and set aside by them for the payment of the principal or Redemption Price of or interest on any Bonds, or for the Trustee, the Issuer or any Depository to give security for any moneys which shall be represented by obligations or certificates of deposit purchased as an investment of such moneys.

(c) All moneys deposited with the Trustee and each Depository shall be credited to the particular Fund or Account to which such moneys belong and, except as provided with respect to the investment of moneys in Qualified Investments in Section 6.3, the moneys credited to each particular Fund or Account shall be kept separate and apart from, and not commingled with, any moneys credited to any other Fund or Account or any other moneys deposited with the Trustee, the Issuer and each Depository, except as provided in Section 6.3.

Section 6.3 Investment of Certain Funds. Moneys held in the Debt Service Account, the Debt Service Reserve Account and the Commodity Swap Reserve Account shall be invested and reinvested by the Trustee at the Written Direction of the Issuer to the fullest extent practicable in Qualified Investments specified in such Written Direction which mature or are payable not later than such times as shall be necessary to provide moneys when needed for payments to be made from such Accounts. Moneys held in the Revenue Fund and the Project Fund may be invested and reinvested by the Trustee at the Written Direction of the Issuer in Qualified Investments specified in such Written Direction which mature not later than such times as shall be necessary to provide moneys when needed for payments to be made from such Funds; and in the case of the Commodity Swap Reserve Account, moneys held may be invested and reinvested by the Trustee at the Written Direction of the Issuer in Qualified Investments specified in such Written Direction that mature not later than such times as shall be necessary to make timely Commodity Swap Payments. Moneys in the Operating Fund (other than moneys in the Operating Fund held with respect to Rebate Payments) may be invested by the Trustee at the Written Direction of the Issuer in Qualified Investments specified in such Written Direction which mature within twelve months or which provide funds as needed; moneys held in the Operating Fund with respect to Rebate Payments shall be invested by the Trustee at the Written Direction of the Issuer in Qualified Investments specified in such Written Direction at fair market value; and moneys in the General Fund may be invested in Qualified Investments specified in such Written Direction; in any case the Qualified Investments in such Funds or in the Accounts therein shall mature not later than such

times as shall be necessary to provide moneys when needed to provide payments from such Funds or Accounts.

The Trustee shall only be required to make investments of moneys held by it in the Funds and Accounts established under this Indenture in accordance with Written Directions received by the Trustee from any Authorized Officer of the Issuer. The Trustee shall be entitled to rely in good faith on any Written Direction of the Issuer as to the suitability and legality of the directed investment and any deposit or investment directed by the Issuer shall constitute a certification by the Issuer that the assets so deposited or to be purchased pursuant to such directions are Qualified Investments. In making any investment in any Qualified Investments with moneys in any Fund or Account established under this Indenture, the Issuer may give Written Direction to the Trustee to combine such moneys with moneys in any other Fund or Account, but solely for purposes of making such investment in such Qualified Investments.

Interest earned on any moneys or investments in the Funds and Accounts established hereunder shall be paid into the Revenue Fund, other than interest earned on any moneys or investments in (i) the Redemption Account in the Debt Service Fund, (ii) the Operating Fund relating to Rebate Payments, (iii) the Debt Service Reserve Account, to the extent the Debt Service Reserve Account is less than the Debt Service Reserve Requirement and (iv) the Commodity Swap Reserve Account to the extent the Commodity Swap Reserve Account is less than the Minimum Amount. Interest earned on any moneys or investments in the Redemption Account in the Debt Service Fund shall be retained in the Redemption Account. Interest earned on any moneys or investments in the Operating Fund relating to Rebate Payments shall be retained in that portion of the Operating Fund relating to Rebate Payments. Interest earned on any moneys or investments in the Debt Service Reserve Account, to the extent the Debt Service Reserve Account is less than the Debt Service Reserve Requirement, shall be retained in the Debt Service Reserve Account, and any amount in excess of the Debt Service Reserve Requirement shall be immediately transferred to the Debt Service Account. Interest earned on any moneys or investments in the Commodity Swap Reserve Account to the extent the Commodity Swap Reserve Account is less than the Minimum Amount, shall be retained in the Commodity Swap Reserve Account, and any amount in excess of the Minimum Amount shall be immediately transferred to the Debt Service Account. If no written investment directions have been delivered to the Trustee for any Fund or Account, moneys shall be held there uninvested by the Trustee.

With respect to any payments to the Revenue Fund from interest earnings on deposit in the Debt Service Reserve Account or the Commodity Swap Reserve Account as provided for under the immediately preceding sentence, any such amounts paid into the Revenue Fund shall be immediately transferred to the Debt Service Account. If no written investment directions have been delivered to the Trustee for any Fund or Account, moneys shall be held there uninvested by the Trustee.

Nothing in this Indenture shall prevent any Qualified Investments acquired as investments of or security for Funds held under this Indenture from being issued or held in book-entry form on the books of the Department of the Treasury of the United States.

Nothing in this Indenture shall preclude the Trustee from investing or reinvesting moneys that it holds in the Funds and Accounts established pursuant to this Indenture through its bond department; *provided, however*, that the Issuer may, in its discretion, by Written Direction to the Trustee, direct that such moneys be invested or reinvested in a manner other than through such bond department.

To the extent any Qualified Investment is insured, guaranteed or otherwise supported by any secondary facility, the Trustee shall make a claim under such facility at such time as shall be required to receive payment thereunder not later than the date required to make any necessary deposit pursuant to Section 5.5 or Section 5.9 or otherwise under Article V.

Section 6.4 Valuation and Sale of Investments. Obligations purchased as an investment of moneys in any Fund created under the provisions of this Indenture shall be deemed at all times to be a part of such Fund and any profit realized from the liquidation of such investment shall be credited to such Fund, and any loss resulting from the liquidation of such investment shall be charged to the respective Fund.

In computing the amount in any Fund created under the provisions of this Indenture for any purpose provided in this Indenture, obligations purchased as an investment of moneys therein shall be valued at the lower of market value or the amortized cost thereof. The accrued interest paid in connection with the purchase of any obligation shall be included in the value thereof until interest on such obligation is paid. Such computation shall be determined at the Written Direction of the Issuer to the Trustee, as of each Principal Installment payment date and at such other times as the Issuer shall reasonably determine. Guaranteed investment contracts or similar agreements shall be valued at their face value to the extent that they provide for withdrawals without market adjustment or penalty when they are required to provide payment pursuant to this Indenture.

Except as otherwise provided in this Indenture, the Trustee shall use reasonable efforts to sell at the best price obtainable, or present for redemption, any obligation so purchased as an investment whenever it shall be requested to do so by a Written Request of the Issuer. Whenever it shall be necessary in order to provide moneys to meet any payment or transfer from any Fund held by the Trustee, the Trustee shall at the written direction and request of the Issuer use reasonable efforts to sell at the best price obtainable or present for redemption such obligation or obligations designated in a Written Instrument of the Issuer by an Authorized Officer necessary to provide sufficient moneys for such payment or transfer.

The Issuer acknowledges that to the extent regulations of the Comptroller of the Currency or other applicable regulatory entity grants the Issuer the right to receive brokerage confirmations of security transactions as they occur, the Issuer specifically waives receipt of such confirmations to the extent permitted by law. The Trustee shall not be required to provide any brokerage information.

The Trustee shall not be liable or responsible for any loss, fee, tax or other charge incurred in connection with any such investment, sale or presentation for redemption made in the manner provided above in Section 6.2, Section 6.3 or Section 6.4.

ARTICLE VII

PARTICULAR COVENANTS OF THE ISSUER

The Issuer covenants and agrees with the Trustee and the Bondholders as follows:

Section 7.1 Payment of Bonds. The Issuer shall duly and punctually pay or cause to be paid, but solely from the Trust Estate, the principal or Redemption Price, if any, of every Bond and the interest thereon, at the dates and places and in the manner provided in the Bonds, according to the true intent and meaning thereof.

Section 7.2 Extension of Payment of Bonds. The Issuer shall not directly or indirectly extend or assent to the extension of the maturity of any of the Bonds or the time of payment of any claims for interest by the purchase or funding of such Bonds or claims for interest or by any other arrangement, and in case the maturity of any of the Bonds or the time for payment of any such claims for interest shall be extended, such Bonds or claims for interest shall not be entitled, in case of any default under this Indenture, to the benefit of this Indenture or to any payment out of Revenues or Funds established by this Indenture, including the investment income, if any, thereof, pledged under this Indenture or the moneys (except moneys held in trust for the payment of particular Bonds or claims for interest pursuant to this Indenture) held by the Fiduciaries, except subject to the prior payment of the principal of all Bonds Outstanding the maturity of which has not been extended and of such portion of the accrued interest on the Bonds as shall not be represented by such extended claims for interest.

Section 7.3 Offices for Servicing Bonds. The Issuer shall at all times maintain one or more agencies where Bonds may be presented for payment. Pursuant to Section 2.2, the Issuer has appointed the Trustee as Bond Registrar and Paying Agent for the Bonds and the Trustee hereby accepts such appointments. The Trustee shall at all times maintain one or more agencies or offices where Bonds may be presented for registration, exchange or transfer, where principal and Redemption Price of and interest on the Bonds may be paid, where reports, statements and other documents furnished to the Trustee hereunder may be inspected and where notices, demands and other documents may be served upon the Issuer in respect of the Bonds or of this Indenture, and the Trustee shall continuously maintain or make arrangements to provide such services.

Section 7.4 Further Assurance. At any and all times the Issuer shall, as far as it may be authorized by law, comply with any reasonable request of the Trustee to pass, make, do, execute, acknowledge and deliver all and every such further resolutions, acts, deeds, conveyances, assignments, transfers and assurances as may be necessary or desirable for the better assuring, conveying, granting, pledging, assigning and confirming all and singular the rights, Revenues and other moneys, securities and funds hereby pledged, or intended so to be, or which the Issuer may become bound to pledge.

Section 7.5 Power to Issue Bonds and Pledge the Trust Estate. The Issuer is duly authorized under all applicable laws to create and issue the Bonds and to execute and deliver this Indenture and to pledge the Trust Estate, in the manner and to the extent provided in this Indenture. Except to the extent otherwise provided in this Indenture, the Trust Estate will be free and clear of

any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the security interest, the pledge and assignment created by this Indenture, and all action on the part of the Issuer to that end has been and will be duly and validly taken. The Bonds and the provisions of this Indenture are and will be the valid and legally enforceable special obligations of the Issuer in accordance with their terms and the terms of this Indenture. The Issuer shall at all times, to the extent permitted by law, defend, preserve and protect the pledge of the Revenues and other moneys, securities and funds pledged under this Indenture and all the rights of the Bondholders under this Indenture against all claims and demands of all Persons whomsoever.

Section 7.6 Power To Enter Into and Perform the Commodity Supply Contract. The Issuer has and will have as long as any Bonds are Outstanding, good right and lawful power to (a) enter into the Commodity Supply Contract, (b) observe and perform its obligations under the Commodity Supply Contract, and (c) charge and collect the amounts payable by the Project Participant in respect of the gas supply or electricity supply and other services provided by the Issuer thereunder.

The Issuer has, and, to the extent permitted by law, will have as long as any Bonds are Outstanding, good right and lawful power to fix, establish, maintain and collect fees and charges for the sale and transportation or transmission of natural gas or electricity or otherwise with respect to the Commodity Project, subject to the terms of the Commodity Supply Contract.

Section 7.7 Creation of Liens. Unless the Trustee receives a Rating Confirmation, the Issuer shall not issue any bonds, notes, debentures or other evidences of indebtedness of similar nature, other than the Bonds, payable out of or secured by a security interest in or pledge or assignment of the Trust Estate and shall not create or cause to be created any lien or charge on the Trust Estate, provided, however, that nothing contained in this Indenture shall prevent the Issuer from entering into or issuing, if and to the extent permitted by law, (a) evidence of indebtedness provided this Indenture is discharged and satisfied as provided in Section 12.1, or (b) the Issuer Commodity Swap and Interest Rate Swaps upon the terms and conditions set forth herein. Nothing in this Indenture limits the Issuer's right to issue any bonds, notes, debentures or other evidences of indebtedness of similar nature payable out of or secured by a security interest in or pledge or assignment of a trust estate separate from the Trust Estate.

Section 7.8 Limitations on Operating Expenses and Other Costs. The Issuer shall not incur Operating Expenses in any Fiscal Year in excess of the reasonable and necessary amount of such Operating Expenses. The Issuer shall not budget or incur Operating Expenses that would cause the Revenues available for Scheduled Debt Service Deposits pursuant to Section 5.5(a)(ii) to be insufficient for such purpose.

Section 7.9 Fees and Charges. The Issuer shall at all times fix, establish, maintain and collect (or cause to be collected) fees and charges, as and to the extent permitted under the provisions of the Commodity Supply Contract, for the sale and transportation or transmission of natural gas or electricity or otherwise with respect to the Commodity Project which shall be sufficient to provide Revenues in each Fiscal Year which, together with the other amounts available therefor, shall be equal to the sum of:

(a) The amount estimated by the Issuer to be required to be paid during such Fiscal Year into the Operating Fund;

(b) The amounts, if any, required to be paid during such Fiscal Year into the Debt Service Fund;

(c) The amounts, if any, to be paid during such Fiscal Year into any other Fund established under Section 5.2; and

(d) All other charges or liens whatsoever payable out of Revenues during such Fiscal Year.

Section 7.10 Commodity Supply Contract; Commodity Remarketing. (a) the Issuer shall cause all Revenues payable by the Project Participant under the Commodity Supply Contract to be (i) payable directly to the Trustee for deposit into the Revenue Fund or (ii) payable directly to the Trustee as custodian for deposit into one or more custodial accounts established pursuant to Section 5.2(b). The Issuer shall enforce the provisions of the Commodity Supply Contract, as well as any other contract or contracts entered into relating to the Commodity Project, and duly perform its covenants and agreements thereunder.

(b) In the event that the Project Participant fails to pay when due any amounts owed to the Issuer under the Commodity Supply Contract, the Issuer shall promptly exercise its right to suspend all gas and electricity deliveries to the Project Participant, and shall promptly give notice to the Commodity Supplier to follow the provisions set forth in the Commodity Remarketing Exhibit to the Commodity Purchase Agreement for each Month of such suspension with respect to the quantities of natural gas or electricity for which deliveries have been suspended.

(c) In the event that the Project Participant delivers a Call Option Notice (as defined in the Commodity Supply Contract) electing to have its contract quantity of natural gas or electricity remarketed for the duration of any Reset Period (as defined in the Commodity Supply Contract), then the Issuer will promptly give notice to the Commodity Supplier to follow the provisions set forth in the Commodity Remarketing Exhibit to the Commodity Purchase Agreement for each Month of such Reset Period with respect to any quantities of natural gas or electricity that would otherwise have been delivered to the Project Participant.

(d) The Issuer will not consent or agree to or permit any termination, rescission, amendment, assignment or novation of, or otherwise take any action under or in connection with, the Commodity Supply Contract that will impair its ability to comply during the current or any future year with the provisions of Section 7.9; *provided that*:

(i) The Issuer may take any other action under or in connection with the Commodity Supply Contract that is expressly permitted pursuant to the provisions thereof;

(ii) The Issuer and the Project Participant may amend the Commodity Supply Contract to change any delivery point;

(iii) the Commodity Supply Contract may be amended upon receipt of (A) a Rating Confirmation with respect to such amendment, and (B) to the extent such amendment would have a material effect (including a change in the timing of payments, the source of such payments, or the Issuer's rights of collection thereof) upon the Receivables Purchase Provisions or the Issuer Commodity Swap, the consent of the Commodity Supplier or the Commodity Swap Counterparty, respectively; and

(iv) The Issuer may agree to an assignment or novation of all or a portion of the Project Participant's rights and obligations under the Commodity Supply Contract upon (A) compliance with the restrictions on assignment set forth therein, (B) receipt of a Rating Confirmation with respect to such assignment or novation, and (C) provision of notice of such assignment or novation to the Commodity Swap Counterparty.

(e) As of the date of this Indenture, the Commodity Supply Contract with the Project Participant set forth on Schedule I shall be the only Commodity Supply Contract until such time, if any, that an assignment or novation occurs in accordance with the requirements set forth above. Without prejudice to the rights of the Commodity Supplier to remarket gas or electricity under the Commodity Purchase Agreement or to an assignment or novation of the Commodity Supply Contract in compliance with this Section 7.11, the Issuer may sell daily quantities of natural gas or electricity to be delivered under the Commodity Purchase Agreement only pursuant to the Commodity Supply Contract. A copy of the Commodity Supply Contract and any amendment to the Commodity Supply Contract, certified by an Authorized Officer, shall be filed with the Trustee.

Section 7.11 Commodity Purchase Agreement; Commodity Supplier Documents. (a) The Issuer shall enforce the provisions of the Commodity Purchase Agreement and duly perform its covenants and agreements thereunder.

(b) The Trustee shall promptly notify the Issuer of any payment default that has occurred and is continuing on the part of the Commodity Supplier under the Commodity Purchase Agreement. The Issuer shall provide the Trustee with Written Notice of the Early Termination Payment Date (i) by noon New York City time on the fifth Business Day preceding a Mandatory Purchase Date if an amount equal to the Purchase Price of the Bonds that are subject to such Mandatory Purchase Date has not been deposited with the Trustee, and (ii) in all other cases, not more than five days after such date is determined.

(c) The Issuer will not consent or agree to or permit any assignment of, rescission of or amendment to or otherwise take any action under or in connection with the Commodity Purchase Agreement which will in any manner materially impair or materially adversely affect the rights of the Issuer thereunder or the rights or security of the Bondholders under this Indenture; *provided* that the Commodity Purchase Agreement may be assigned or amended without Bondholder consent upon receipt of a Rating Confirmation with respect to such assignment or amendment. Copies of the Commodity Purchase Agreement, and any amendments thereto, certified by an Authorized Officer, shall be filed with the Trustee.

(d) The Issuer has the right, pursuant to the Commodity Supplier LLCA to appoint a director (the "*Issuer-Appointed Director*") to the board of directors of the Commodity Supplier.

In any vote that comes before the board of directors of the Commodity Supplier regarding the Commodity Supplier Documents, the Issuer shall instruct the Issuer-Appointed Director to exercise its voting rights in favor of (i) the Commodity Supplier (A) observing and performing its obligations under the Commodity Purchase Agreement and (B) observing and performing its obligations under the other Commodity Supplier Documents and enforcing the provisions thereof against the counterparties thereto, and (ii) not permitting any assignment of, rescission of or amendment to or waiver of the Commodity Supplier Documents which will in any manner materially impair or materially adversely affect the rights of the Issuer thereunder or the rights or security of the Bondholders under this Indenture.

Section 7.12 Trustee as Agent. The Issuer hereby irrevocably appoints and directs the Trustee as its agent to issue notices and to take any other actions that the Issuer is required or permitted to take under:

- (a) the Commodity Supply Contract (including the suspension of natural gas or electricity deliveries upon the default of the Project Participant),
- (b) the Commodity Purchase Agreement (including notices to direct the remarketing of natural gas or electricity thereunder),
- (c) the Receivables Purchase Provisions,
- (d) the Issuer Commodity Swap, and
- (e) any Interest Rate Swap.

In exercising this agency power, the Trustee shall have the authority to take any such actions as it deems necessary under the Commodity Supply Contract, the Commodity Purchase Agreement, the Receivables Purchase Provisions, the Issuer Commodity Swap and any Interest Rate Swap. Notwithstanding this grant of agency power, the Issuer shall retain, in the absence of any conflicting action by the Trustee, all of the Issuer's obligations under the foregoing agreements and the right to exercise any rights for which it has appointed the Trustee as its agent in accordance with the foregoing; *provided however*, if an Event of Default has occurred, the Trustee shall have the right to notify the Issuer to cease exercising such rights and, upon receipt of such notice with a copy provided to the Project Participant under the Commodity Supply Contract, and the Commodity Supplier under the Commodity Purchase Agreement, the Trustee shall have exclusive authority to exercise such rights, and to collect and apply all amounts payable thereunder, until such time as the Trustee issues a subsequent notice otherwise.

Section 7.13 Issuer Commodity Swap. The Issuer shall cause all Commodity Swap Receipts and any other amounts payable to the Issuer pursuant to the Issuer Commodity Swap to be collected and paid directly to the Trustee for deposit into the Revenue Fund. The Issuer shall enforce the provisions of the Issuer Commodity Swap and duly perform its covenants and agreements thereunder. The Trustee shall promptly notify the Issuer of any payment default that has occurred and is continuing on the part of a Commodity Swap Counterparty under an Issuer Commodity Swap. The Issuer will not consent or agree to or permit any termination or rescission

of or amendment to or otherwise take any action under or in connection with an Issuer Commodity Swap that will impair the ability of the Issuer to comply during the current or any future year with the provisions hereof. The Issuer shall only exercise its right to terminate an Issuer Commodity Swap in compliance with Section 2.12(b). A copy of each Issuer Commodity Swap certified by an Authorized Officer shall be filed with the Trustee, and a copy of any amendment to the Issuer Commodity Swap, certified by an Authorized Officer, shall be filed with the Trustee.

Section 7.14 Interest Rate Swap. The Issuer shall cause all Interest Rate Swap Receipts or other amounts payable to the Issuer pursuant to the Interest Rate Swap to be collected and paid to the Trustee for deposit into the Debt Service Account. The Issuer shall enforce the provisions of the Interest Rate Swap and duly perform its covenants and agreements thereunder. The Trustee shall promptly notify the Issuer of any payment default that has occurred and is continuing on the part of the Interest Rate Swap Counterparty under any Interest Rate Swap. The Issuer will not consent or agree to or permit any termination or rescission of or amendment to or otherwise take any action under or in connection with the Interest Rate Swap that will impair the ability of the Issuer to comply during the current or any future year with the provisions hereof. The Issuer shall only exercise its right to terminate the Interest Rate Swap in compliance with Section 2.13(b). A copy of the Interest Rate Swap certified by an Authorized Officer shall be filed with the Trustee, and a copy of any amendment to the Interest Rate Swap, certified by an Authorized Officer, shall be filed with the Trustee.

Section 7.15 Accounts and Reports. (a) The Issuer shall keep or cause to be kept with respect to the Commodity Project proper books of record and account (separate from all other records and accounts) in accordance with generally accepted accounting principles, as such may be modified by the provisions of this Indenture, in which complete and correct entries shall be made of its transactions relating to the Commodity Project, the amount of Revenues and the application thereof and each Fund and Account established under this Indenture and relating to its costs and charges under the Commodity Supply Contract and any other contracts for the sale or purchase of natural gas or electricity, and which, together with the Commodity Purchase Agreement and all contracts and all other books and papers of the Issuer relating to the Commodity Project, shall, subject to the terms thereof, at all times during regular business hours be subject to the inspection of the Trustee and the Holders of an aggregate of not less than 5% in principal amount of the Bonds then Outstanding or their representatives duly authorized in writing.

(b) The Trustee shall advise the Issuer promptly after the end of each month of the respective transactions during such month relating to each Fund and Account held by it under this Indenture.

(c) The Issuer shall file with the Trustee (i) forthwith upon becoming aware of any Event of Default or default in the performance by the Issuer of any covenant, agreement or condition contained in this Indenture, a Written Certificate of the Issuer and specifying such Event of Default or default and (ii) within 180 days after the end of each Fiscal Year, commencing with the first Fiscal Year ending following the issuance of the Bonds, a Written Certificate of the Issuer signed by an appropriate Authorized Officer stating whether, to the best of such Authorized Officer's knowledge and belief, the Issuer has kept, observed, performed and fulfilled its covenants and obligations contained in this Indenture and that there does not exist at the date of such certificate

any default by the Issuer under this Indenture or any Event of Default or other event which, with the lapse of time specified in Section 8.1, would become an Event of Default, or, if any such default or Event of Default or other event shall so exist, specifying the same and the nature and status thereof.

(d) The reports, statements and other documents required to be furnished to the Trustee pursuant to any provisions of this Indenture shall be available for the inspection of Bondholders at all times during regular business hours at the designated corporate trust office of the Trustee (upon reasonable prior written notice of inspection delivered to the Trustee) and shall be mailed to each Bondholder who shall file a written request therefor with the Issuer. The Issuer may charge each Bondholder requesting such reports, statements and other documents a reasonable fee to cover reproduction, handling and postage.

Section 7.16 Payment of Taxes and Charges. The Issuer will from time to time duly pay and discharge, or cause to be paid and discharged, all taxes, assessments and other governmental charges, or required payments in lieu thereof, lawfully imposed upon the properties of the Issuer or upon the rights, revenues, income, receipts, and other moneys, securities and funds of the Issuer when the same shall become due (including all rights, moneys and other property transferred, assigned or pledged under this Indenture), and all lawful claims for labor and material and supplies, except those taxes, assessments, charges or claims which the Issuer shall in good faith contest by proper legal proceedings if the Issuer shall in all such cases have set aside on its books reserves deemed adequate by the Issuer with respect thereto.

Section 7.17 Tax Covenants. (a) The Issuer covenants that it shall not take any action, or fail to take any action, or permit any action to be taken on its behalf or cause or permit any circumstance within its control to arise or continue, if any such action or inaction would adversely affect the exclusion from gross income for federal income tax purposes of the interest on any of the Bonds under Section 103 of the Internal Revenue Code. Without limiting the generality of the foregoing, the Issuer covenants that it will (i) comply with the instructions and requirements of the Tax Agreement and (ii) exercise commercially reasonable efforts to cause the Bonds to be redeemed (A) in such amount as may be necessary to maintain the exclusion from federal gross income of interest on the Bonds and (B) in whole in the event that interest on the Bonds becomes includible in federal gross income. The Issuer further agrees to follow any directions provided by Special Tax Counsel with respect to any such redemption. The covenant in clause (i) above shall survive payment in full or defeasance of the Bonds.

(b) In the event that at any time the Issuer is of the opinion that for purposes of this Section 7.18 it is necessary or helpful to restrict or limit the yield on the investment of any moneys held by the Trustee under this Indenture, the Issuer shall so instruct the Trustee in writing as to the specific actions to be taken, and the Trustee shall take such action as specified in such instructions.

(c) Notwithstanding any other provisions of this Section 7.18, if the Issuer shall provide to the Trustee an Opinion of Special Tax Counsel that any specified action required under this Section 7.18 is no longer required or that some further or different action is required to maintain the exclusion from federal income tax of interest on the Bonds, the Issuer and the Trustee may

conclusively rely on such opinion in complying with the requirements of this Section 7.18 and of the Tax Agreement, and the covenants hereunder shall be deemed to be modified to that extent.

(d) Notwithstanding any other provision of this Indenture to the contrary, upon the Issuer's failure to observe or refusal to comply with the above covenants, the Holders of the Bonds, or the Trustee acting on their behalf pursuant to their written request and direction, shall be entitled to the rights and remedies provided to Bondholders under this Indenture based upon the Issuer's failure to observe, or refusal to comply with, the above covenants. In connection with any action taken by it under this Section 7.18, the Trustee shall have the benefit of all of the protective provisions set forth in Article IX.

Section 7.18 General. (a) The Issuer shall at all times maintain its existence and shall do and perform or cause to be done and performed all acts and things required to be done or performed by or on behalf of the Issuer under the provisions of the Act and this Indenture.

(b) The Issuer shall not consolidate or amalgamate with, or merge with or into, or transfer all or substantially all its assets to (other than the sale in the normal course of business of natural gas or electricity to the Project Participant pursuant to the Commodity Supply Contract), or reorganize, reincorporate or reconstitute into or as, another entity unless, (i) prior to such event, the Issuer receives confirmation from the Commodity Swap Counterparty that such event does not trigger a termination event under Section 5(b)(iv) (Credit Event Upon Merger) of the Issuer Commodity Swap and confirmation from any Interest Rate Swap Counterparty that such event does not trigger a termination event under Section 5(b)(iv) (Credit Event Upon Merger) of the Interest Rate Swap; and (ii) at the time of such consolidation, amalgamation, merger, transfer, reorganization, reincorporation or reconstitution, the resulting, surviving or transferee entity assumes all the obligations of the Issuer under the Issuer Commodity Swap and the Interest Rate Swap.

(c) The Issuer shall not take any action, or fail to take any action, or permit any action to be taken on its behalf or cause or permit any circumstance within its control to arise or continue, if any such action or inaction would adversely affect the ratings on the Bonds.

(d) Upon the date of authentication and delivery of any of the Bonds, all conditions, acts and things required by law and this Indenture to exist, to have happened and to have been performed precedent to and in the issuance of such Bonds shall exist, have happened and have been performed, and the issuance of such Bonds, together with all other obligations of the Issuer, shall comply in all respects with the applicable laws of the State.

Section 7.19 Bankruptcy. To the extent permitted by law, the Issuer shall not, prior to the date which is one year and one day after the termination of this Indenture, acquiesce, petition, or otherwise invoke the process of any court or government authority for the purpose of commencing or sustaining a case under any federal or state bankruptcy, insolvency, or similar law or appointing a receiver, liquidator, assignee, trustee, custodian or sequestrator for any substantial part of its property, or ordering the winding up or liquidation of the affairs of the Issuer. This covenant shall survive the termination of this Indenture.

Section 7.20 Bylaws. The Issuer shall not amend the provisions of its Bylaws contained in the section thereof titled, “Maintenance of Separate Legal Status,” in any manner that would call into question its status as a separate and distinct legal entity.

Section 7.21 Avoidance of Failed Remarketing. The Issuer covenants that it will exercise commercially reasonable efforts to avoid a Failed Remarketing.

ARTICLE VIII

EVENTS OF DEFAULT AND REMEDIES

Section 8.1 Events of Default. Any one or more of the following shall constitute an “Event of Default” hereunder:

(a) default shall be made in the due and punctual payment of the principal or Redemption Price or Purchase Price of any Bond when and as the same shall become due and payable, whether at maturity or by call for redemption or tender, or otherwise;

(b) default shall be made in the due and punctual payment of any installment of interest on any Bond or the unsatisfied balance of any Sinking Fund Installment therefor (except when such Sinking Fund Installment is due on the maturity date of such Bond), when and as such interest installment or Sinking Fund Installment shall become due and payable;

(c) default shall be made by the Issuer in the performance or observance of any other of the covenants, agreements or conditions on its part in this Indenture or in the Bonds contained, and such default shall continue for a period of 60 days or, if such default cannot reasonably be remedied within such 60 day period, such longer period so long as diligent efforts are being made to remedy such default, after written notice thereof specifying such default and requiring that it shall have been remedied and stating that such notice is a “Notice of Default” hereunder is given to the Issuer by the Trustee or to the Issuer and to the Trustee by the Holders of not less than 10% in principal amount of the Bonds Outstanding;

(d) default shall be made in the due and punctual payment of any Commodity Swap Payment or Interest Rate Swap Payment when and as the same shall become due and payable;

(e) The Issuer shall commence a voluntary case or similar proceeding under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect (provided, however, that such event shall not constitute an Event of Default hereunder unless in addition, (i) the Issuer is unable to meet its debts with respect to the Commodity Project as such debts mature or (ii) any plan of adjustment or other action in such proceeding would affect in any way the Revenues or the Commodity Project), or shall authorize, apply for or consent to the appointment of or taking possession by a receiver, liquidator, assignee, trustee, custodian, sequestrator or similar official for the Commodity

Project, or any part thereof, and/or the rents, fees, charges or other revenues therefrom, or shall make any general assignment for the benefit of creditors, or shall make a written declaration or admission to the effect that it is unable to meet its debts with respect to the Commodity Project as such debts mature, or shall authorize or take any action in furtherance of any of the foregoing;

(f) a court having jurisdiction in the premises shall enter a decree or order for relief in respect of the Issuer in an involuntary case or similar proceeding under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, (*provided, however*, that such event shall not constitute an Event of Default hereunder unless in addition, (i) the Issuer is unable to meet its debts with respect to the Commodity Project as such debts mature or (ii) any plan of adjustment or other action in such proceeding would affect in any way the Revenues or the Commodity Project, or a decree or order appointing a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official for the Commodity Project, or any part thereof, and/or the rents, fees, charges or other revenues therefor, or a decree or order for the dissolution, liquidation or winding up of the Issuer and its affairs or a decree or order finding or determining that the Issuer is unable to meet its debts with respect to the Commodity Project as such debts mature, and any such decree or order shall remain unstayed and in effect for a period of 60 consecutive days; and

(g) there shall occur any other Event of Default specified in a Supplemental Indenture.

(i) For an Event of Default under clause (a) or (b) above, the Trustee (by written notice to the Issuer), or the Holders of not less than a majority in principal amount of the Bonds Outstanding (by written notice to the Issuer and to the Trustee) may declare the principal of all the Bonds then Outstanding, and the interest accrued thereon, to be due and payable immediately, and upon any such declaration the same shall become and be immediately due and payable.

(ii) For an Event of Default under clause (c) through (g) above, Holders of not less than one hundred percent in principal amount of the Bonds outstanding (by written notice to the Trustee) may direct the Trustee to declare (by written notice to the Issuer) the principal of all Bonds then Outstanding, and the interest accrued thereon, to be due and payable immediately, and upon any such declaration the same shall become and be immediately due and payable; provided, however, that such direction or declaration may be rescinded and annulled pursuant to the following paragraph, in which case such declaration shall ipso facto be deemed to be rescinded and any such default shall ipso facto be deemed to be annulled, but no such rescission or annulment shall extend to or affect any subsequent default or impair or exhaust any right or power consequent thereon.

The Holders of a majority in principal amount of the Bonds Outstanding (by written notice to the Issuer and the Trustee) or the Trustee on its own accord (by written notice to the Issuer, but subject to the following sentence) may rescind and annul a direction and declaration under

clause (2) above if, at any time before the Bonds shall have matured by their terms, all overdue installments of interest upon the Bonds, together with the reasonable fees, charges, expenses and liabilities of the Trustee, and all other sums then payable by the Issuer under this Indenture (except the principal of, and interest accrued since the next preceding Interest Payment Date on, the Bonds due and payable solely by virtue of such declaration) shall have been paid by or for the account of the Issuer or provision satisfactory to the Trustee shall be made for such payment, and all defaults under the Bonds or under this Indenture (other than the payment of principal and interest due and payable solely by reason of such declaration) shall have been remedied or secured to the satisfaction of the Trustee or provision deemed by the Trustee to be adequate shall be made therefor. Such a rescission by the Trustee on its own accord may be revoked by written directions to the contrary delivered to the Trustee and the Issuer by the Holders of a majority in principal amount of the Bonds Outstanding.

Section 8.2 Accounting and Examination of Records after Default. (a) The Issuer covenants that if an Event of Default shall have happened and shall not have been remedied, the books of record and accounts of the Issuer and all other records relating to the Commodity Project shall at all times during regular business hours be subject to the inspection and use of the Trustee and of its agents and attorneys.

(b) The Issuer covenants that if an Event of Default shall have happened and shall not have been remedied, the Issuer, upon demand of the Trustee, will account, as if it were the trustee of an express trust, for all Revenues and other moneys, securities and funds pledged or held under this Indenture for such period as shall be stated in such demand.

Section 8.3 Enforcement of Agreements; Application of Moneys after Default. (a) The Issuer covenants that, if an Event of Default shall happen and shall not have been remedied, it shall upon the demand of the Trustee (i) take such additional actions on its part as shall be necessary to cause the Project Participant to make payments of all amounts due under the Commodity Supply Contract to the Trustee, (ii) take such additional actions on its part as shall be necessary to cause the Commodity Swap Counterparty to make payment of all amounts due under the the Issuer Commodity Swap directly to the Trustee, (iii) take such additional actions on its part as shall be necessary to cause any Interest Rate Swap Counterparty to make payment of all amounts due under the Interest Rate Swap directly to the Trustee, (iv) execute and deliver such additional instruments that may be necessary to establish or confirm its pledge and assignment to the Trustee of its rights and remedies afforded the Issuer under the Commodity Supply Contract, and (v) pay over or cause to be paid over to the Trustee any Revenues which have not been paid directly to the Trustee as promptly as practicable after receipt thereof. In addition, the Issuer hereby irrevocably appoints the Trustee as its agent to issue notices (including notices to direct the remarketing of natural gas or electricity) and to take any other actions that the Issuer is required or permitted to take under the Commodity Purchase Agreement, the Commodity Supply Contract, the Issuer Commodity Swap and any Interest Rate Swap. The Commodity Purchase Agreement, the Commodity Supply Contract and the Issuer Commodity Swap may be amended at any time for changes in Delivery Points as provided therein, without the consent of the Bondholders, any parties other than those to the relevant agreement, and without the provisions of opinions or other process hereunder. In exercising this agency power, the Trustee shall have the authority to take any such actions as it deems necessary under the Commodity Purchase Agreement, the Commodity Supply Contract,

and the Issuer Commodity Swap. Notwithstanding this grant of agency power, the Issuer shall retain, in the absence of any conflicting action by the Trustee, the right to exercise any rights for which it has appointed the Trustee as its agent in accordance with the foregoing; *provided, however*, if an Event of Default has occurred, the Trustee shall have the right to notify the Issuer to cease exercising such rights and, upon receipt of such notice with a copy provided to the Commodity Supplier under the Commodity Purchase Agreement, the Project Participant under the Commodity Supply Contract, and the Commodity Swap Counterparty under the Issuer Commodity Swap, the Trustee shall have exclusive authority to exercise such rights until such time as the Trustee issues a subsequent notice otherwise.

(b) During the continuance of an Event of Default, the Trustee shall apply all moneys, securities, funds and Revenues received by the Trustee pursuant to any right given or action taken under the provisions of this Article VIII as follows and in the following order, provided that (x) moneys held in the Debt Service Account shall not be used for purposes other than payment of the interest and principal or Redemption Price then due on the Bonds and the payment of Interest Rate Swap Payments then due under the Interest Rate Swap in accordance with clause (iii) of this subsection (b) and (y) moneys in the Commodity Swap Reserve Account shall be used first to pay any Commodity Swap Payments then due:

(i) Expenses of Fiduciaries – to the payment of the reasonable fees, charges, expenses and liabilities of the Fiduciaries, including court costs and fees and expenses of their counsel;

(ii) Operating Expenses – to the payment of the amounts required for Operating Expenses and for the payment of such other amounts related to the Commodity Project as are necessary in the judgment of the Trustee to prevent loss of Revenues. For this purpose, the books of record and accounts of the Issuer relating to the Commodity Project shall at all times during regular business hours be subject to the inspection of the Trustee and its representatives and agents during the continuance of such Event of Default; and

(iii) Principal or Redemption Price and Interest – to the payment of the principal and interest then due and unpaid upon the Bonds and the Interest Rate Swap Payments then due under the Interest Rate Swap, without preference or priority of principal over interest, of interest over principal, of any installment of interest over any other installment of interest, of any Bond over any other Bond, of any payment in respect of such principal or interest over any Interest Rate Swap Payment or of any Interest Rate Swap Payment over any payment in respect of such principal or interest, ratably, according to the amounts due respectively for principal and interest, to the Persons entitled thereto without any discrimination or preference except as to any difference in the respective rates of interest specified in the Bonds and the Interest Rate Swap.

When the Trustee incurs costs or expenses (including legal fees, costs and expenses) or renders services after the occurrence of an Event of Default, such costs and expenses and the compensation for such services are intended to constitute expenses of administration under any federal or state bankruptcy, insolvency, arrangement, moratorium, reorganization or other debtor relief law.

(c) If and whenever all overdue installments of interest on all Bonds, together with the reasonable charges, expenses and liabilities of the Trustee, and all other sums payable or secured by the Issuer under this Indenture, including the principal and Redemption Price of and accrued unpaid interest on all Bonds which shall then be payable by declaration or otherwise, shall either be paid by or for the account of the Issuer, or provisions satisfactory to the Trustee shall be made for such payment, and all defaults under this Indenture or the Bonds shall be made good or secured to the satisfaction of the Trustee or provision deemed by the Trustee to be adequate shall be made therefor, the Trustee shall pay over to the Issuer all moneys, securities and funds then remaining unexpended in the hands of the Trustee (except moneys, securities and funds deposited or pledged, or required by the terms of this Indenture, particularly Section 5.2, to be deposited or pledged, with the Trustee), and thereupon the Issuer and the Trustee shall be restored, respectively, to their former positions and rights under this Indenture. No such payment over to the Issuer by the Trustee nor restoration of the Issuer and the Trustee to their former positions and rights shall extend to or affect any subsequent default under this Indenture or impair any right consequent thereon.

Section 8.4 Appointment of Receiver. The Trustee shall have the right, upon the happening of an Event of Default, to apply in an appropriate proceeding for the appointment of a receiver of the Commodity Project.

Section 8.5 Proceedings Brought by Trustee. (a) If an Event of Default shall happen and shall not have been remedied, then and in every such case, the Trustee, by its agents and attorneys, may proceed, and upon written request of the Holders of not less than a majority in principal amount of the Bonds Outstanding shall proceed, to protect and enforce its rights and the rights of the Holders of the Bonds under this Indenture forthwith by a suit or suits in equity or at law, whether for the specific performance of any covenant herein contained, or in aid of the execution of any power herein granted, or for an accounting against the Issuer as if the Issuer were the trustee of an express trust, or in the enforcement of any other legal or equitable right as the Trustee, being advised by counsel, shall deem most effectual to enforce any of its rights or to perform any of its duties under this Indenture.

(b) All rights of action under this Indenture may be enforced by the Trustee without the possession of any of the Bonds or the production thereof at the trial or other proceedings, and any such suit or proceedings instituted by the Trustee shall be brought in its name.

(c) The Holders of not less than a majority in principal amount of the Bonds at the time Outstanding may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee, provided that the Trustee shall have the right to decline to follow any such direction if the Trustee shall be advised by counsel that the action or proceeding so directed may not lawfully be taken, or if the Trustee in good faith shall determine that the action or proceeding so directed would involve the Trustee in personal liability or be unjustly prejudicial to the Bondholders not parties to such direction.

(d) Upon commencing a suit in equity or upon other commencement of judicial proceedings by the Trustee to enforce any right under this Indenture, the Trustee shall be entitled

to exercise any and all rights and powers conferred in this Indenture and provided to be exercised by the Trustee upon the occurrence of any Event of Default.

(e) Regardless of the happening of an Event of Default, the Trustee shall have power to, but unless requested in writing by the Holders of a majority in principal amount of the Bonds then Outstanding and furnished with reasonable security and indemnity, shall be under no obligation to, institute and maintain such suits and proceedings as it may be advised shall be necessary or expedient to prevent any impairment of the security under this Indenture by any acts which may be unlawful or in violation of this Indenture, and such suits and proceedings as the Trustee may be advised shall be necessary or expedient to preserve or protect its interests and the interests of the Bondholders.

Section 8.6 Restriction on Bondholder's Action. (a) No Holder of any Bond shall have any right to institute any suit, action or proceeding at law or in equity for the enforcement of any provision of this Indenture or the execution of any trust under this Indenture or for any remedy under this Indenture, unless such Holder (i) shall have previously given to the Trustee written notice of the happening of an Event of Default, as provided in this Article VIII, and the Holders of at least a majority in principal amount of the Bonds then Outstanding shall have filed a written request with the Trustee, (ii) shall have offered it reasonable opportunity, either to exercise the powers granted in this Indenture or by the Act or by the laws of the State or to institute such action, suit or proceeding in its own name, and (iii) shall have offered to the Trustee adequate security and indemnity against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee shall have refused to comply with such request for a period of 60 days after receipt by it of such notice, request and offer of indemnity, it being understood and intended that no one or more Holders of Bonds shall have any right in any manner whatever by its or their action to affect, disturb or prejudice the pledge created by this Indenture, or to enforce any right under this Indenture, except in the manner therein provided; and that all proceedings at law or in equity to enforce any provision of this Indenture shall be instituted, had and maintained in the manner provided in this Indenture and for the equal benefit of all Holders of the Outstanding Bonds, subject only to the provisions of Section 7.2.

(b) Nothing in this Indenture or in the Bonds shall affect or impair the obligation of the Issuer, which is absolute and unconditional, to pay only from the Trust Estate, in accordance with the terms of this Indenture, at the respective dates of maturity and places therein expressed the principal of (and premium, if any) and interest on the Bonds to the respective Holders thereof, or affect or impair the right of action, which is also absolute and unconditional, of any Holder to enforce such payment of its Bond.

Section 8.7 Remedies Not Exclusive. No remedy by the terms of this Indenture conferred upon or reserved to the Trustee or the Bondholders is intended to be exclusive of any other remedy, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Indenture or existing at law or in equity or by statute on or after the date of execution and delivery of this Indenture.

Section 8.8 Effect of Waiver and Other Circumstances. (a) No delay or omission of the Trustee or any Bondholder to exercise any right or power arising upon the happening of an Event

of Default shall impair any right or power or shall be construed to be a waiver of any such Event of Default or be an acquiescence therein; and every power and remedy given by this Article VIII to the Trustee or to the Bondholders may be exercised from time to time and as often as may be deemed expedient by the Trustee or by the Bondholders.

(b) Prior to the declaration of maturity of the Bonds as provided in Section 8.1, the Holders of not less than a majority in principal amount of the Bonds at the time Outstanding, or their attorneys-in-fact duly authorized, may on behalf of the Holders of all of the Bonds waive any past default under this Indenture and its consequences, except a default in the payment of interest on or principal of or premium (if any) on any of the Bonds. No such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

Section 8.9 Notice of Default. The Trustee shall promptly mail written notice of the occurrence of any Event of Default to each registered owner of Bonds then Outstanding at its address, if any, appearing upon the registry books of the Issuer.

ARTICLE IX

CONCERNING THE FIDUCIARIES

Section 9.1 Acceptance by Trustee of Duties. The Trustee accepts the duties and obligations imposed upon it by this Indenture and the trusts hereby created, but only, however, upon the terms and conditions set forth in this Indenture.

Section 9.2 Paying Agents; Appointment and Acceptance of Duties. (a) The Issuer shall appoint one or more Paying Agents for the Bonds, and may at any time or from time to time appoint one or more other Paying Agents. All Paying Agents appointed shall have the qualifications set forth in Section 9.13 for a successor Paying Agent. The Trustee is hereby appointed as initial Paying Agent.

(b) Each Paying Agent shall signify its acceptance of the duties and obligations imposed upon it by this Indenture by executing and delivering to the Issuer and to the Trustee a written acceptance thereof.

Section 9.3 Responsibilities of Fiduciaries. (a) The recitals of fact herein and in the Bonds contained shall be taken as the statements of the Issuer and no Fiduciary assumes any responsibility for the correctness of the same. No Fiduciary makes any representations as to the validity or sufficiency of this Indenture or of any Bonds issued hereunder or as to the security afforded by this Indenture, and no Fiduciary shall incur any liability in respect thereof. Furthermore, no Fiduciary shall be responsible with respect to any statement or information in any offering documents with respect to the Bonds (except for information provided by any Fiduciary for inclusion in such offering documents). The Trustee shall, however, be responsible for its representation contained in its certificate of authentication on the Bonds. No Fiduciary shall be under any responsibility or duty with respect to the application of any moneys paid by such Fiduciary in accordance with the provisions of this Indenture to the Issuer or to any other Person. No Fiduciary shall be under any obligation or duty to perform any act which would involve it in

expense or liability or to institute or undertake any suit or proceeding under this Indenture or to enter any appearance in or defend any suit in respect thereof, or to advance any of its own moneys, expend or risk its own funds or otherwise incur any financial liability unless properly indemnified against any and all costs and expenses, outlays and counsel fees and other anticipated disbursements, and against all liability except to the extent caused by its own negligence or willful misconduct. Subject to the provisions of subsection (b), no Fiduciary shall be liable in connection with the performance of its duties hereunder except for its own negligence or willful misconduct. To the extent permitted by law, the Issuer shall indemnify the Fiduciaries for, and hold the Fiduciaries harmless against, any loss, liability or expense incurred by it, arising out of or in connection with the acceptance or administration of this Indenture or the trusts hereunder or the performance of its duties hereunder, except to the extent determined by a court of competent jurisdiction to have been primarily caused by its own negligence or willful misconduct. Notwithstanding anything to the contrary, the permissive rights of any Fiduciary to do things enumerated under this Indenture shall not be construed as duties.

The Trustee shall not be responsible for insuring any property conveyed or collecting any insurance monies, or for the validity of the execution by the Issuer of this Indenture or of any supplements hereto, or instruments of further assurance, or for the sufficiency of the security for the Bonds, or for the investment of monies as herein permitted (except that no investment shall be made except in compliance with Section 6.2 and Section 6.3 hereof), or for the recording or re-recording, filing or re-filing of this Indenture, or any supplement or amendment thereto, or of any security for the Bonds issued hereunder or intended to be secured hereby, or for the value or title of the property herein conveyed or otherwise as to the maintenance of the security hereof. Except as specifically provided in this Indenture, the Trustee shall not be bound to ascertain or inquire as to the performance or observance of any covenants, conditions, or agreements on the part of the Issuer, but the Trustee may require of the Issuer full information and advice as to the performance of such covenants. The Trustee shall not be required to give any bond or surety in respect of the execution of the said trusts and powers.

(b) The Trustee, prior to the occurrence of an Event of Default and after the curing of all Events of Default which may have occurred, undertakes to perform such duties and only such duties as are specifically set forth in this Indenture. In case an Event of Default has occurred (which has not been cured) the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his own affairs. Any provision of this Indenture relating to action taken or to be taken by the Trustee or to evidence upon which the Trustee may rely shall be subject to the provisions of this Section 9.3 and Section 9.4.

(c) The Trustee shall not be considered in breach of or in default in its obligations hereunder or progress in respect thereto in the event of enforced delay (“unavoidable delay”) in connection with the performance of such obligations due to unforeseeable causes beyond its control and without its fault or negligence, including, but not limited to, Acts of God or of the public enemy or terrorists, acts of a government, acts of the other party, the existence or escalation of fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, earthquakes, explosion, mob violence, riot, inability to procure or general sabotage or rationing of labor, equipment, facilities, sources of energy, material or supplies in the open market, litigation or

arbitration involving a party or others relating to zoning or other governmental action or inaction pertaining to the project, malicious mischief, condemnation, and unusually severe weather or delays of suppliers or subcontractors due to such causes.

Section 9.4 Evidence on Which Fiduciaries May Act. (a) Each Fiduciary, upon receipt of any notice, direction, resolution, request, consent, order, certificate, report, opinion, bond or other paper or document furnished to it pursuant to any provision of this Indenture, shall examine such instrument to determine whether it conforms to the requirements of this Indenture and shall be protected in acting upon any such instrument believed by it to be genuine and to have been signed or presented by the proper party or parties. Each Fiduciary may consult with any consultant, accountant, or counsel, who may or may not be counsel to the Issuer, and the opinion of such consultant, accountant, or counsel shall be full and complete authorization and protection in respect of any action taken or suffered by it under this Indenture in good faith and in accordance therewith and the Trustee shall be under no duty to make any investigation or inquiry into any statements contained or matters referred to in any such instrument.

(b) Whenever any Fiduciary shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action under this Indenture, such matter (unless other evidence in respect thereof be therein specifically prescribed) may be deemed to be conclusively proved and established by a Written Certificate of the Issuer, and such certificate shall be full warrant for any action taken or suffered in good faith under the provisions of this Indenture upon the faith thereof; but in its discretion the Fiduciary may in lieu thereof accept other evidence of such fact or matter or may require such further or additional evidence as it may deem reasonable. Neither the Trustee, the Bond Registrar nor the Paying Agent shall be bound to recognize any Person as a Bondholder or to take any action at its request unless its Bond shall be deposited with such entity or satisfactory evidence of the ownership of such Bond shall be furnished to such entity.

(c) The Trustee shall have the right to accept and act upon directions given pursuant to this Indenture, or any other document reasonably relating to the Bonds and delivered using Electronic Means; provided, however, that the Issuer shall provide to the Trustee a Written Certificate of the Issuer listing Authorized Officers with the authority to provide such directions and containing specimen signatures of such Authorized Officers, which Written Certificate of the Issuer shall be amended whenever a person is to be added or deleted from the listing. If the Issuer elects to give the Trustee directions using Electronic Means and the Trustee in its discretion elects to act upon such directions, the Trustee's understanding of such directions shall be deemed controlling. The Issuer understands and agrees that the Trustee cannot determine the identity of the actual sender of such directions and that the Trustee shall conclusively presume that directions that purport to have been sent by an Authorized Officer listed on the Written Certificate of the Issuer provided to the Trustee have been sent by such Authorized Officer. The Issuer shall be responsible for ensuring that only Authorized Officers transmit such directions to the Trustee and that all Authorized Officers treat applicable user and authorization codes, passwords and/or authentication keys as confidential and with extreme care. The Trustee shall not be liable for any losses, costs or expenses arising directly or indirectly from the Trustee's reliance upon and compliance with such directions notwithstanding such directions conflict or are inconsistent with a subsequent written direction. The Issuer agrees: (i) to assume all risks arising out of the use of Electronic Means to submit directions to the Trustee, including without limitation the risk of the

Trustee acting on unauthorized directions, and the risk of interception and misuse by third parties; (ii) that it is fully informed of the protections and risks associated with the various methods of transmitting directions to the Trustee and that there may be more secure methods of transmitting directions, (iii) that the security procedures (if any) to be followed in connection with its transmission of directions provide to it a commercially reasonable degree of protection in light of its particular needs and circumstances and (iv) to notify the Trustee immediately upon learning of any compromise or unauthorized use of the security procedures.

(d) Paper copies or “printouts” of any document, if introduced as evidence in any judicial, arbitral, mediation or other administrative proceeding, will be admissible as between the Issuer and the Trustee to the same extent and under the same conditions as other original business records created and maintained in documentary form. Neither party shall contest the admissibility of true and accurate copies of Electronically Signed Documents on the basis of the best evidence rule or as not satisfying the business records exception to the hearsay rule.

Section 9.5 Compensation. The Issuer shall pay or cause to be paid to each Fiduciary from time to time reasonable compensation for all services rendered under this Indenture, and also all reasonable expenses, charges, legal fees and other disbursements, including those of its attorneys, agents and employees, incurred in and about the performance of their powers and duties under this Indenture, in accordance with the agreements made from time to time between the Issuer and the Fiduciary. Subject to the provisions of Section 9.3, the Issuer further agrees to indemnify and save each Fiduciary harmless against, and agrees to pay or reimburse, the expenses, charges, legal fees and disbursements described in the preceding sentence. The Trustee shall be entitled to reimbursement of all expenses and liabilities incurred and all advances made by the Trustee, except for expenses and liabilities incurred or advances made by the Trustee as a result of its gross negligence or willful misconduct.

Section 9.6 Certain Permitted Acts. Any Fiduciary, individually or otherwise, may become the owner of any Bonds, with the same rights it would have if it were not a Fiduciary. To the extent permitted by law, any Fiduciary may act as depository for, and permit any of its officers or directors to act as a member of, or in any other capacity with respect to, any committee formed to protect the rights of Bondholders or to effect or aid in any reorganization growing out of the enforcement of the Bonds or this Indenture, whether or not any such committee shall represent the Holders of a majority in principal amount of the Bonds then Outstanding. Nothing herein shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Bondholder any plan of reorganization, arrangement, adjustment, or composition affecting the Bonds or the rights of any Holder thereof, or to authorize the Trustee to vote in respect of the claim of any Bondholder in any such proceeding without the approval of the Bondholders so affected.

Section 9.7 Resignation of Trustee. The Trustee may at any time resign and be discharged of the duties created by this Indenture by giving not less than forty-five (45) days’ written notice to the Issuer and mailing notice thereof to the Holders of Bonds then Outstanding, specifying the date when such resignation shall take effect, and such resignation shall take effect upon the day specified in such notice unless (a) previously a successor shall have been appointed by the Issuer or the Bondholders as provided in Section 9.9, in which event such resignation shall take effect immediately on the appointment of such successor, or (b) a successor shall not have

been appointed by the Issuer or the Bondholders as provided in Section 9.9 on such date, in which event such resignation shall not take effect until a successor is appointed.

Section 9.8 Removal of the Trustee. The Trustee may be removed with 30 days' prior notice with or without cause by an instrument or concurrent instruments in writing, filed with the Trustee, and signed by the Holders of a majority in principal amount of the Bonds then Outstanding or their attorneys-in-fact duly authorized, excluding any Bonds held by or for the account of the Issuer. So long as no Event of Default, or an event which, with notice or passage of time, or both, would become an Event of Default, shall have occurred and be continuing, the Trustee may be removed at any time, with or without cause, upon 30 days' notice, by a resolution of the Issuer filed with the Trustee and delivery of a Written Certificate of the Issuer to the Trustee with respect to the foregoing. Notwithstanding the foregoing, any such removal of the Trustee shall not be effective until a successor Trustee has been appointed pursuant to Section 9.9. The Trustee's rights under this Indenture to indemnity and any amounts due and payable to such Trustee shall survive any such removal.

Section 9.9 Appointment of Successor Trustee. (a) In case at any time the Trustee shall resign or shall be removed or shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or if a receiver, liquidator or conservator of the Trustee, or of its property, shall be appointed, or if any public officer shall take charge or control of the Trustee, or of its property or affairs, a successor Trustee may be appointed by the Issuer by a duly executed written instrument signed by an Authorized Officer.

(b) If no appointment of a successor Trustee shall be made pursuant to the foregoing provisions of this Section 9.9 within 45 days after the Trustee shall have given to the Issuer written notice as provided in Section 9.7 or within 30 days after a vacancy in the office of the Trustee shall have occurred by reason of its inability to act, removal, or for any other reason whatsoever, the Trustee or the Holder of any Bond (in any case) may apply to any court of competent jurisdiction to appoint a successor Trustee. Said court may thereupon, after such notice, if any, as such court may deem proper, appoint a successor Trustee.

(c) Any Trustee appointed under the provisions of this Section 9.9 in succession to the Trustee shall be a bank or trust company organized under the laws of any state or a national banking association and shall have capital stock, surplus and undivided earnings aggregating at least \$50,000,000 if there be such a bank with trust powers or trust company or national banking association willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by this Indenture.

Section 9.10 Transfer of Rights and Property to Successor Trustee. Any successor trustee appointed under this Indenture shall execute, acknowledge and deliver to its predecessor Trustee, and also to the Issuer, an instrument accepting such appointment, and thereupon such successor Trustee, without any further act, deed or conveyance, shall become fully vested with all moneys, estates, properties, rights, powers, duties and obligations of such predecessor Trustee, with like effect as if originally named as Trustee; but the Trustee ceasing to act shall nevertheless, on the Written Request of the Issuer or of the successor Trustee, execute, acknowledge and deliver such instrument of conveyance and further assurance and do such other things as may reasonably be

required for more fully and certainly vesting and confirming in such successor Trustee all the right, title and interest of the predecessor Trustee in and to any property, rights, interests and estates held by it under this Indenture, and shall pay over, assign and deliver to the successor Trustee any money or other property subject to the trusts and conditions herein set forth. Should any deed, conveyance or instrument in writing from the Issuer be required by such successor Trustee for more fully and certainly vesting in and confirming to such successor Trustee any such estates, rights, powers and duties, any and all such deeds, conveyances and instruments in writing shall, on request, and so far as may be authorized by law, be executed, acknowledged and delivered by the Issuer. Any such successor Trustee shall promptly notify the Paying Agents of its appointment as Trustee.

Section 9.11 Merger or Consolidation. Any company into which any Fiduciary may be merged or converted or with which it may be consolidated or any company resulting from any merger, conversion or consolidation to which it shall be a party or any company to which any Fiduciary may sell or transfer all or substantially all of its corporate trust business, provided such company shall be a bank with trust powers or trust company organized under the laws of any state of the United States or a national banking association and shall be authorized by law to perform all the duties imposed upon it by this Indenture and shall meet the qualifications set forth in Section 9.9(c), shall be the successor to such Fiduciary without the execution or filing of any paper or the performance of any further act.

Section 9.12 Adoption of Authentication. In case any of the Bonds contemplated to be issued under this Indenture shall have been authenticated but not delivered, any successor Trustee may adopt the certificate of authentication of any predecessor Trustee so authenticating such Bonds and deliver such Bonds so authenticated; and in case any of the said Bonds shall not have been authenticated, any successor Trustee may authenticate such Bonds in the name of the predecessor Trustee, or in the name of the successor Trustee, and in all such cases such certificate shall have the full force which it is provided, anywhere in said Bonds or in this Indenture, that the certificate of the Trustee shall have.

Section 9.13 Resignation or Removal of Paying Agent and Appointment of Successor. (a) Any Paying Agent may at any time resign and be discharged of the duties and obligations created by this Indenture by giving at least 45 days' written notice to the Issuer, the Trustee and the other Paying Agents. Any Paying Agent may be removed with 30 days' prior notice by an instrument filed with such Paying Agent and the Trustee and signed by an Authorized Officer. Any successor Paying Agent shall be appointed by the Issuer and shall be a bank or trust company organized under the laws of any state of the United States or a national banking association, having capital stock, surplus and undivided earnings aggregating at least \$50,000,000, and willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by this Indenture.

(b) In the event of the resignation or removal of any Paying Agent, such Paying Agent shall pay over, assign and deliver any moneys held by it as Paying Agent to its successor, or if there be no successor, to the Trustee. In the event that for any reason there shall be a vacancy in the office of any Paying Agent, the Trustee shall act as such Paying Agent.

Section 9.14 Trustee's Reliance. The Trustee may conclusively rely, and shall be protected in acting upon any notice, direction, ordinance, resolution, request, consent, order, certificate, report, opinion, bond, statement, facsimile transmission, electronic mail or other paper or document furnished to the Trustee pursuant to any provision of this Indenture and that is believed by the Trustee to be genuine and to have been signed or presented by the proper party or parties and in conformity with the formal requirements of this Indenture. The Trustee may consult with any consultant, account, or counsel, who may or may not be counsel to the Issuer, and the opinion of such consultant, accountant, or counsel shall be full and complete authorization and protection in respect of any action taken or suffered by Trustee under this Indenture in good faith and in accordance therewith. The Trustee shall be under no duty to make any investigation or inquiry into any statements contained or matters referred to in any such instrument. Any request, direction, authority or consent given by the Holders of any Bond shall be conclusive and binding upon all Holders of the same Bond and any Bond issued in its place.

Section 9.15 Trustee's Liability. (a) The Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith, in accordance with the provisions of this Indenture, in accordance with the direction of the Holders of a majority in principal amount of the Outstanding Bonds, relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or, except for its negligence or willful misconduct, exercising any trust or power conferred upon the Trustee, under this Indenture with respect to the Bonds.

(b) The Trustee shall not be deemed to have knowledge of an Event of Default except for those Events of Default in Sections 8.1(a) and (b) unless a Responsible Officer of the Trustee shall have actual knowledge of such Event of Default. As used herein, "actual knowledge" shall mean the actual fact or statement of knowing without any independent duty to make any investigation with regard thereto.

(c) The Trustee's rights to immunities and protection from liability hereunder and its rights to payment of its fees and expenses shall survive its resignation or removal and final payment or defeasance of the Bonds. All rights, benefits, indemnifications and releases from liability granted herein to the Trustee shall extend to the directors, officers, employees, agents and counsel of the Trustee.

(d) Whenever in the administration of the trusts imposed upon it by this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a Written Certificate of the Issuer, and such Written Certificate shall be full warrant to the Trustee for any action taken or suffered in good faith under the provisions of this Indenture in reliance upon such Written Instrument, but in its discretion the Trustee may, in lieu thereof, accept other evidence of such matter or may require such additional evidence as it may deem reasonable.

(e) No provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in connection with the performance or exercise of any of its duties hereunder, or in the exercise of any of its rights or powers hereunder, if it shall have

reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

(f) Under no circumstances shall the Trustee in any of its capacities hereunder be liable in its individual capacity for the obligations evidenced by the Bonds or be subject to any personal liability or accountability by reason of the issuance of this Bond or in respect of any undertakings by the Trustee under this Indenture. In accepting the trust hereby created, the Trustee acts solely as Trustee for the holders of the Bonds and not in its individual capacity, and all persons, including without limitation the holders of the Bonds and the Issuer, having any claim against the Trustee arising from this Indenture shall look only to the Funds and Accounts held by the Trustee hereunder for payment except as otherwise provided herein.

(g) To the extent permitted by law, the Issuer shall indemnify the Trustee for, and hold it harmless against, any loss, damage, claim, liability or expense incurred by it, arising out of or in connection with the acceptance or administration of this Indenture or the trusts hereunder or the performance of any of its duties hereunder, except with respect to same caused by Trustee's negligence or willful misconduct.

(h) In no event shall the Trustee be liable for indirect, consequential, special or punitive damages (including, but not limited to lost profits), regardless of (i) whether the Trustee has been advised of the likelihood of such loss or damage or (ii) the form of action.

Section 9.16 Trustee's Agents or Attorneys. The Trustee may execute any of its trusts or powers under this Indenture or perform any of its duties hereunder either directly or by or through agents, attorneys, custodians or nominees appointed with due care, and shall not be responsible for any willful misconduct or negligence on the part of any agent, attorney, custodian or nominee so appointed.

Section 9.17 Lien Filings. Notwithstanding anything to the contrary contained in this Indenture, the Trustee shall not be responsible for any initial filings of any financing statements or the information contained therein (including the exhibits thereto), the perfection of any such security interests, or the accuracy or sufficiency of any description of collateral in such initial filings or for filing any modifications or amendments to the initial filings required by any amendments to Article IX of the Uniform Commercial Code, if applicable. In addition, unless the Trustee shall have received Written Notice from the Issuer that any such initial filing or description of collateral was or has become defective, the Trustee shall be fully protected (i) in relying on such initial filing and descriptions in filing any financing or continuation statements or modifications thereto pursuant to this Section 9.17 and (ii) in filing any continuation statements in the same filing offices as the initial filings were made. If applicable, the Trustee shall cause to be filed a continuation statement with respect to each Uniform Commercial Code financing statement relating to the Bonds which was filed at the time of the issuance thereof, in such manner and in such places as the initial filings were made, provided that a copy of the filed original financing statement is timely delivered to the Trustee. The Issuer shall be responsible for the reasonable costs incurred by the Trustee in the preparation and filing of all continuation statements hereunder, including payment of any filing fees, and shall give the Trustee any assistance it reasonably

requests in order to enable the Trustee to file continuation statements for the lien established by this Indenture.

ARTICLE X

SUPPLEMENTAL INDENTURES

Section 10.1 Supplemental Indentures Not Requiring Consent of Bondholders. The Issuer and the Trustee may from time to time, subject to the conditions and restrictions in this Indenture contained, enter into a Supplemental Indenture or Indentures, in form satisfactory to the Trustee, which shall thereafter form a part hereof, without the consent of the Bondholders for any one or more of the following purposes:

- (a) To cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in this Indenture;
- (b) To insert such provisions clarifying matters or questions arising under this Indenture as are necessary or desirable and are not contrary to or inconsistent with this Indenture as theretofore in effect;
- (c) To make any other modification or amendment of this Indenture which the Trustee shall in its sole discretion determine will not have a material adverse effect on the Bondholders or any Interest Rate Swap Counterparty; and in making such a determination, the Trustee shall be entitled to rely conclusively upon an Opinion of Counsel and/or certificates of investment bankers or other financial professionals or consultants;
- (d) To add to the covenants and agreements of the Issuer in this Indenture, other covenants and agreements to be observed by the Issuer which are not contrary to or inconsistent with this Indenture as theretofore in effect;
- (e) To add to the limitations and restrictions in this Indenture, other limitations and restrictions to be observed by the Issuer which are not contrary to or inconsistent with this Indenture as theretofore in effect;
- (f) To authorize the issuance of Refunding Bonds;
- (g) To authorize, in compliance with all applicable law, Bonds to be issued in the form of coupon Bonds registrable as to principal only and, in connection therewith, specify and determine the matters and things relative to the issuance of such coupon Bonds, including provisions relating to the timing and manner of provision of any notice required to be given hereunder to the Holders of such coupon Bonds, which are not contrary to or inconsistent with this Indenture as theretofore in effect, or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first authentication and delivery of such coupon Bonds;

(h) To provide for the execution of an Issuer Commodity Swap in accordance with the provisions hereof;

(i) To provide for a Liquidity Facility and Liquidity Facility Provider in accordance with the provisions hereof;

(j) To confirm, as further assurance, any security interest, pledge or assignment under, and the subjection to any security interest, pledge or assignment created or to be created by, this Indenture of the Revenues or of any other moneys, securities or funds;

(k) To add to the Events of Default in this Indenture additional Events of Default;

(l) To add to this Indenture any provisions relating to the application of interest earnings on any Fund or Account under this Indenture required by law to preserve the exclusion of interest on Bonds issued from gross income for federal income tax purposes;

(m) To evidence the appointment of a successor Trustee; or

(n) If the Bonds affected by such change are rated by a Rating Agency, to make any change upon receipt of a Rating Confirmation with respect to the Bonds so affected.

Each Supplemental Indenture authorized by this Section 10.1 shall become effective as of the date of its execution and delivery by the Issuer and the Trustee or such later date as shall be specified in such Supplemental Indenture.

A Supplemental Indenture will be deemed to not materially adversely affect the Holders of any Bonds that are subject to mandatory tender on or before the effective date of the Supplemental Indenture.

Section 10.2 Supplemental Indentures Effective with Consent of Bondholders. At any time or from time to time, subject to Section 10.3(d) and Section 11.5(b), a Supplemental Indenture may be entered into by the Issuer and the Trustee subject to notice to and consent by Bondholders in accordance with and subject to the provisions of Article XI, which Supplemental Indenture, upon compliance with the provisions of said Article XI, shall become fully effective in accordance with its terms as provided in said Article XI.

Section 10.3 General Provisions. (a) This Indenture shall not be modified or amended in any respect except as provided in and in accordance with and subject to the provisions of this Article X and Article XI. Nothing contained in this Article X or Article XI shall affect or limit the right or obligation of the Issuer to adopt, make, do, execute, acknowledge or deliver any resolution, act or other instrument pursuant to the provisions of Section 7.4 or the right or obligation of the Issuer to execute and deliver to any Fiduciary any instrument which elsewhere in this Indenture it is provided shall be delivered to said Fiduciary.

(b) Any Supplemental Indenture referred to and permitted or authorized by Section 10.1 may be entered into between the Issuer and the Trustee without the consent of any of the Bondholders, but shall become effective only on the conditions, to the extent and at the time provided in said Section. A copy of every Supplemental Indenture shall be accompanied by an Opinion of Counsel stating that such Supplemental Indenture has been duly and lawfully executed in accordance with the provisions of this Indenture, is authorized or permitted by this Indenture, and is valid and binding upon the Issuer and enforceable in accordance with its terms; *provided*, that such Opinion of Counsel may take exception as to the effect of, or for restrictions or limitations imposed by or resulting from, bankruptcy, insolvency, debt adjustment, moratorium, reorganization, arrangement, fraudulent conveyance or other similar laws relating to or affecting creditors' rights generally, and judicial discretion and the valid exercise of the sovereign police powers of the State and of the constitutional power of the United States of America and may state that no opinion is being rendered as to the availability of any particular remedy.

(c) The Trustee is hereby authorized to enter into any Supplemental Indenture referred to and permitted or authorized by Section 10.1 or Section 10.2 and to make all further agreements and stipulations which may be therein contained, and the Trustee, in taking such action, shall be fully protected in relying on an Opinion of Counsel that such Supplemental Indenture is authorized or permitted by the provisions of this Indenture.

(d) No Supplemental Indenture shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto; *provided, however* this Section 10.3 shall not affect the rights of the Holders or the Issuer to remove the Trustee as provided in Section 9.8 herein.

(e) Notwithstanding Section 12.5, no Supplemental Indenture (or other amendment to this Indenture) shall change or modify (i) the order of priority of deposits to the Operating Fund or the Commodity Swap Reserve Account as set forth in clauses (i) and (iii) of Section 5.5(a), respectively, (ii) the Minimum Amount to be maintained in the Commodity Swap Reserve Account, or the purposes to which amounts on deposit in such Commodity Swap Reserve Account may be applied, as set forth in Section 5.3(b), (iii) the priority of the application of funds following an Event of Default as set forth in Section 8.3, (iv) the definition of Operating Expenses, (v) the security for payments to be made pursuant to this Indenture to the Commodity Swap Counterparty, any Interest Rate Swap Counterparty and the Commodity Supplier, as purchaser under the Receivables Purchase Provisions, (vi) any of the rights or interests of the Commodity Swap Counterparty, any Interest Rate Swap Counterparty (if any) or the Commodity Supplier, as purchaser under the Receivables Purchase Provisions, granted herein or in the Issuer Commodity Swap, any Interest Rate Swap or the Receivables Purchase Provisions, as the case may be, or (vii) the provisions of Section 5.3(c), Section 5.7(h) or Section 5.8(b) regarding the sale by the Trustee of Call Receivables in respect of a Swap Payment Deficiency, (A) in each case unless the prior written consent of each Commodity Swap Counterparty has been obtained, and each Commodity Swap Counterparty shall have full right to enforce this provision, and (B) in the case of clauses (v) and (vi) of this Section 10.3(e), unless the prior written consent of any Interest Rate Swap Counterparty and/or the Commodity Supplier, as applicable, has been obtained.

ARTICLE XI

AMENDMENTS

Section 11.1 Mailing. Any provision in this Article XI for the mailing of a notice or other paper to Bondholders shall be fully complied with if it is mailed postage prepaid only (a) to each registered owner of Bonds then Outstanding at its address, if any, appearing upon the registry books of the Issuer, and (b) to the Trustee.

Section 11.2 Powers of Amendment. Any modification or amendment of this Indenture and of the rights and obligations of the Issuer and of the Holders of the Bonds thereunder may be made by a Supplemental Indenture, subject to Section 10.3(e), with the written consent given as provided in Section 11.3 (a) of the Holders of not less than a majority in principal amount of Outstanding Bonds, and (b) in case the modification or amendment changes the terms of any Sinking Fund Installment, of the Holders of not less than a majority in principal amount of Outstanding Bonds of the particular maturity entitled to such Sinking Fund Installment; *provided, however,* that if such modification or amendment will, by its terms, not take effect so long as any Bonds of any specified like maturity remain Outstanding (or are subject to mandatory purchase) the consent of the Holders of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this Section 11.2; and *provided further, however,* that if such modification or amendment would adversely affect any Interest Rate Swap Counterparty, such modification or amendment shall be subject to the prior written consent of the Interest Rate Swap Counterparty. No such modification or amendment shall permit a change in the terms of redemption or maturity of the principal of any Outstanding Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon without the consent of the Holder of such Bond, or shall reduce the percentages or otherwise affect the classes of Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto. For the purposes of this Section 11.2, the Bonds shall be deemed to be affected by a modification or amendment of this Indenture if the same adversely affects or diminishes the rights of the Holders of Bonds in any material respect. The Trustee may in its discretion determine whether or not in accordance with the foregoing powers of amendment Bonds would be materially affected by any modification or amendment of this Indenture and any such determination shall be binding and conclusive on the Issuer and all Holders of Bonds. For purposes of this Section 11.2, the Holders of any Bonds may include the initial Holders thereof, regardless of whether such Bonds are being held for resale.

Section 11.3 Consent of Bondholders. The Issuer and the Trustee may at any time enter into a Supplemental Indenture making a modification or amendment permitted by the provisions of Section 11.2 to take effect when and as provided in this Section 11.3. A copy of such Supplemental Indenture (or brief summary thereof or reference thereto in form approved by the Trustee), together with a request to Bondholders for their consent thereto in form satisfactory to the Trustee, shall be mailed by the Issuer to Bondholders (but failure to mail such copy and request shall not affect the validity of the Supplemental Indenture when consented to as in this Section 11.3 provided). Such Supplemental Indenture shall not be effective unless and until there shall have been filed with the Trustee (a) the written consents of Holders of the percentages of Outstanding

Bonds specified in Section 11.2, subject to Section 11.5(b), (b) the written consent of any Interest Rate Swap Counterparty if required by Section 11.2, and (c) an Opinion of Counsel stating that such Supplemental Indenture has been duly and lawfully executed by the Issuer in accordance with the provisions of this Indenture, is authorized or permitted by this Indenture, and is valid and binding upon the Issuer and enforceable in accordance with its terms, subject to any applicable bankruptcy, insolvency or other laws affecting creditors' rights generally and may state that no opinion is being rendered as to the availability of any particular remedy. For purposes of clause (a) of the preceding sentence, the written consent of the Bondholder shall be deemed to have been received if the amendment is expressly referred to in the Supplemental Indenture authorizing such Bonds and in the text of such Bonds and such Bonds recite that such Bondholder shall be deemed to have consented to such amendments by accepting such Bonds. Otherwise, each such consent shall be effective only if accompanied by proof of the holding, at the date of such consent, of the Bonds with respect to which such consent is given, which proof shall be such as is permitted by Section 12.2. A certificate or certificates executed by the Trustee and filed with the Trustee and the Issuer stating that it has examined such proof and that such proof is sufficient in accordance with Section 12.2 shall be conclusive that the consents have been given by the Holders of the Bonds described in such certificate or certificates of the Trustee. Any such consent shall be irrevocable and shall be binding upon the Holder of the Bonds giving such consent and, anything in Section 12.2 to the contrary notwithstanding, upon any subsequent Holder of such Bonds and of any Bonds issued in exchange therefor (whether or not such subsequent Holder thereof has notice of such consent). At any time after the Holders of the required percentages of Bonds shall have filed their consents to the Supplemental Indenture (or have deemed to have consented to such Supplemental Indenture), the Trustee shall make and file with the Trustee and the Issuer a written statement that the Holders of such required percentages of Bonds have consented to, such Supplemental Indenture. Such written statements shall be conclusive that such consents have been received. At any time thereafter, notice stating in substance that the Supplemental Indenture (which may be referred to as a Supplemental Indenture entered into by the Issuer and the Trustee on a stated date, a copy of which is on file with the Trustee) has been consented to by the Holders of the required percentages of Bonds and will be effective as provided in this Section 11.3, may be given to Bondholders by the Trustee by mailing such notice to Bondholders (but failure to mail such notice shall not prevent such Supplemental Indenture from becoming effective and binding as in this Section 11.3 provided). A record, consisting of the certificates or statements required or permitted by this Section 11.3 to be made by the Trustee, shall be proof of the matters therein stated.

Section 11.4 Notifications by Unanimous Consent. The terms and provisions of this Indenture and the rights and obligations of the Issuer and of the Holders of the Bonds thereunder may be modified or amended in any respect upon the execution of a Supplemental Indenture by the Trustee and the Issuer, the consent of the Holders of all of the Bonds then Outstanding (such consent to be given as provided in Section 11.3), and the consent of any Interest Rate Swap Counterparty if required by Section 11.2; *provided, however*, that no such modification or amendment shall change or modify any of the rights or obligations of any Fiduciary or any of the provisions referenced in Section 10.3(e) without the filing with the Trustee of the written assent thereto of such Fiduciary or the Commodity Swap Counterparty, respectively, in addition to the consent of the Bondholders.

Section 11.5 Exclusion of Bonds. (a) Bonds owned or held by or for the account of the Issuer shall not be deemed Outstanding for the purpose of consent or other action or any calculation of Outstanding Bonds provided for in this Article XI, and the Issuer shall not be entitled with respect to such Bonds to give any consent or take any other action provided for in this Article XI. At the time of any consent or other action taken under this Article XI, the Issuer shall furnish the Trustee a certificate of an Authorized Officer, upon which the Trustee may rely, describing all Bonds so to be excluded.

(b) Bonds for which a Bondholder has submitted a notice of abstention in response to a request for consent received pursuant to Section 11.3 shall not be deemed Outstanding for the purpose of consent or other action or any calculation of Outstanding Bonds provided for in this Article XI with respect to any Supplemental Indenture to be entered into by the Issuer and the Trustee; *provided*, that, such notice of abstention shall not apply with respect to any proposed amendments of Section 8.1.

Section 11.6 Notation on Bonds. Bonds authenticated and delivered after the effective date of any action taken as provided in Article X or this Article XI may, and, if the Trustee so determines, shall, bear a notation by endorsement or otherwise in form approved by the Issuer and the Trustee as to such action, and in that case upon demand of the Holder of any Bond Outstanding at such effective date and presentation of its Bond for the purpose at the principal corporate trust office of the Trustee or upon any transfer or exchange of any Bond Outstanding at such effective date, suitable notation shall be made on such Bond or upon any Bond issued upon any such transfer or exchange by the Trustee as to any such action. If the Issuer or the Trustee shall so determine, new Bonds so modified as in the opinion of the Trustee and the Issuer to conform to such action shall be prepared, authenticated and delivered, and upon demand of the Holder of any Bond then Outstanding shall be exchanged, without cost to such Bondholder, for Bonds of the same maturity then Outstanding, upon surrender of such Bonds.

ARTICLE XII

MISCELLANEOUS

Section 12.1 Defeasance. (a) If the Issuer shall pay or cause to be paid, or there shall otherwise be paid, to the Holders of all Bonds the principal or Redemption Price, if applicable, and interest due or to become due thereon, at the times and in the manner stipulated in the Bonds and in this Indenture and shall pay or cause to be paid all amounts due or to become due to any Interest Rate Swap Counterparty under the Interest Rate Swap, then the pledge of all covenants, agreements and other obligations of the Issuer to the Bondholders, shall thereupon cease, terminate and be discharged and satisfied except for remaining rights of registration of transfer and exchange of Bonds; *provided, however*, that this Indenture shall not be discharged until (i) the Issuer shall have paid and satisfied all claims, charges and expenses that constitute Operating Expenses hereunder, (ii) the Trustee shall have received an Opinion of Counsel to the effect that all conditions precedent to the satisfaction and discharge of this Indenture have been fulfilled, and (iii) receipt by the Trustee of a Rating Confirmation. In such event, the Trustee shall cause an accounting for such period or periods as shall be requested by the Issuer to be prepared and filed with the Issuer and, upon the request of the Issuer, shall execute and deliver to the Issuer all such

instruments as may be desirable to evidence such discharge and satisfaction, and the Fiduciaries shall pay over or deliver to the Issuer all moneys or securities held by them pursuant to this Indenture which are not required for the payment of principal or Redemption Price, if applicable, on Bonds not theretofore surrendered for such payment or redemption. If the Issuer shall pay or cause to be paid, or there shall otherwise be paid, to the Holders of any Outstanding Bonds the principal or Redemption Price, if applicable, and interest due or to become due thereon, at the times and in the manner stipulated therein and in this Indenture, such Bonds shall cease to be entitled to any lien, benefit or security under this Indenture, and all covenants, agreements and obligations of the Issuer to the Holders of such Bonds shall thereupon cease, terminate and be discharged and satisfied except for remaining rights of registration of transfer and exchange of Bonds.

(b) Bonds or interest installments for the payment or redemption of which moneys shall have been set aside and shall be held in trust by the Paying Agents (through deposit by the Issuer of funds for such payment or redemption or otherwise) at the maturity or redemption date thereof shall be deemed to have been paid within the meaning and with the effect expressed in subsection (a). In addition, any Outstanding Bonds shall prior to the maturity or redemption date thereof be deemed to have been paid within the meaning and with the effect expressed in subsection (a) upon compliance with the provisions of subsection (c).

(c) Subject to the provisions of subsection (d) of this Section 12.1, any Outstanding Bonds shall prior to the maturity or redemption date thereof be deemed to have been paid within the meaning and with the effect expressed in subsection (a) of this Section 12.1 if (i) in case any of said Bonds are to be redeemed on any date prior to their maturity, the Issuer shall have given to the Trustee irrevocable written instructions accepted in writing by the Trustee to mail as provided in Article IV notice of redemption of such Bonds (other than Bonds which have been purchased by the Trustee at the direction of the Issuer or purchased or otherwise acquired by the Issuer and delivered to the Trustee as hereinafter provided prior to the mailing of such notice of redemption) on said date, (ii) there shall have been deposited with the Trustee either moneys (including moneys withdrawn and deposited pursuant to Section 5.7(g)) in an amount which shall be sufficient, or Defeasance Securities (including any Defeasance Securities issued or held in book-entry form on the books of the Department of the Treasury of the United States) the principal of and the interest on which when due will provide moneys which, together with the moneys, if any, deposited with the Trustee at the same time, shall be sufficient, to pay when due the principal or Redemption Price, if applicable, and interest due and to become due on said Bonds (with such interest being calculated at the Maximum Rate with respect to any Bonds with interest rates that are not fixed to their redemption or maturity date, as applicable) on or prior to the redemption date or maturity date thereof, as the case may be, and (iii) in the event said Bonds are not by their terms subject to redemption within the next succeeding 60 days, the Issuer shall have given the Trustee in form satisfactory to it irrevocable written instructions to mail, as soon as practicable, a notice to the Holders of such Bonds at their last addresses appearing upon the registry books at the close of business on the last Business Day of the month preceding the month for which notice is mailed that the deposit required by (ii) above has been made with the Trustee and that said Bonds are deemed to have been paid in accordance with this Section 12.1 and stating such maturity or redemption date upon which moneys are expected, subject to the provisions of subsection (d) of this Section 12.1, to be available for the payment of the principal or Redemption Price, if

applicable, on said Bonds (other than Bonds which have been purchased by the Trustee at the direction of the Issuer or purchased or otherwise acquired by the Issuer and delivered to the Trustee as hereinafter provided prior to the mailing of the notice of redemption referred to in clause (i)). Any notice of redemption mailed pursuant to the preceding sentence with respect to Bonds which constitute less than all of the Outstanding Bonds of any maturity shall specify the letter and number or other distinguishing mark of each such Bond. The Trustee shall, as and to the extent necessary, apply moneys held by it pursuant to this Section 12.1 to the retirement of said Bonds in amounts equal to the unsatisfied balances (determined as provided in Section 12.1) of any Sinking Fund Installments with respect to such Bonds, all in the manner provided in this Indenture. The Trustee shall, if so directed by the Issuer (A) prior to the maturity date of Bonds deemed to have been paid in accordance with this Section 12.1 which are not to be redeemed prior to their maturity date or (B) prior to the mailing of the notice of redemption referred to in clause (i) above with respect to any Bonds deemed to have been paid in accordance with this Section 12.1 which are to be redeemed on any date prior to their maturity, apply moneys deposited with the Trustee in respect of such Bonds and redeem or sell Defeasance Securities so deposited with the Trustee and apply the proceeds thereof to the purchase of such Bonds and, the Trustee shall immediately thereafter cancel all such Bonds so purchased; *provided, however*, that the moneys and Defeasance Securities remaining on deposit with the Trustee after the purchase and cancellation of such Bonds (or the deemed cancellation thereof) shall be sufficient to pay when due the Principal Installment or Redemption Price, if applicable, and interest due or to become due on all Bonds (calculated as described above), in respect of which such moneys and Defeasance Securities are being held by the Trustee on or prior to the redemption date or maturity date thereof, as the case may be. If, at any time (1) prior to the maturity date of Bonds deemed to have been paid in accordance with this Section 12.1 which are not to be redeemed prior to their maturity date or (2) prior to the mailing of the notice of redemption referred to in clause (i) with respect to any Bonds deemed to have been paid in accordance with this Section 12.1 which are to be redeemed on any date prior to their maturity, the Issuer shall purchase or otherwise acquire any such Bonds and deliver such Bonds to the Trustee prior to their maturity date or redemption date, as the case may be, the Trustee shall immediately cancel all such Bonds so delivered; such delivery of Bonds to the Trustee shall be accompanied by directions from the Issuer to the Trustee as to the manner in which such Bonds are to be applied against the obligation of the Trustee to pay or redeem Bonds deemed paid in accordance with this Section 12.1. The directions given by the Issuer to the Trustee referred to in the preceding sentences shall also specify the portion, if any, of such Bonds so purchased or delivered and cancelled or deemed cancelled to be applied against the obligation of the Trustee to pay Bonds deemed paid in accordance with this Section 12.1 upon their maturity date or dates and the portion, if any, of such Bonds so purchased or delivered and cancelled or deemed cancelled to be applied against the obligation of the Trustee to redeem Bonds deemed paid in accordance with this Section 12.1 on any date or dates prior to their maturity. In the event that on any date as a result of any purchases, acquisitions and cancellations or deemed cancellations of Bonds as provided in this Section 12.1 the total amount of moneys and Defeasance Securities remaining on deposit with the Trustee under this Section 12.1 is in excess of the total amount which would have been required to be deposited with the Trustee on such date in respect of the remaining Bonds in order to satisfy clause (ii) of this subsection (c) of Section 12.1, the Trustee shall, if requested by the Issuer, pay the amount of such excess to the Issuer free and clear of any trust, lien, security interest, pledge or assignment securing said Bonds or otherwise existing under this Indenture. Except as otherwise provided in subsections (c) and (d) of this Section 12.1, neither Defeasance

Securities nor moneys deposited with the Trustee pursuant to this Section 12.1 nor principal or interest payments on any such Defeasance Securities shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal or Redemption Price, if applicable, and interest on said Bonds; provided that any cash received from such principal or interest payments on such Defeasance Securities deposited with the Trustee, (x) to the extent such cash will not be required at any time for such purpose, shall be paid over to the Issuer as received by the Trustee, free and clear of any trust, lien or pledge securing said Bonds or otherwise existing under this Indenture, and (y) to the extent such cash will be required for such purpose at a later date, shall, to the extent practicable, be reinvested in Qualified Investments maturing at times and in amounts sufficient to pay when due the principal or Redemption Price, if applicable, and interest to become due on said Bonds on or prior to such redemption date or maturity date thereof, as the case may be, and interest earned from such reinvestments shall be paid over to the Issuer, as received by the Trustee, free and clear of any trust, lien, security interest, pledge or assignment securing said Bonds or otherwise existing under this Indenture. In connection with any such deposit of Defeasance Securities, or any determination of the sufficiency or remaining sufficiency thereof, for any of the purposes described in this Section 12.1, there shall be delivered to the Trustee, on which it shall be entitled to rely, a verification report of an independent certified public accountant, verification agent or similar expert to the effect that such Defeasance Securities, together with investment earnings thereon (and other available cash deposited with the Trustee at the same time for the applicable purpose), will be sufficient to pay when and as due and payable the principal (or Redemption Price, if applicable), interest, and premium, if applicable, on the applicable Bonds to redemption or maturity, as applicable.

(d) Anything in this Indenture to the contrary notwithstanding, any moneys held by a Fiduciary in trust for the payment and discharge of any of the Bonds which remain unclaimed for two years after the date when such Bonds have become due and payable, either at their stated maturity dates or by call for earlier redemption, if such moneys were held by the Fiduciary at such date, or for two years after the date of deposit of such moneys if deposited with the Fiduciary after the said date when such Bonds became due and payable, shall, at the Written Request of the Issuer, be repaid by the Fiduciary to the Issuer, as its absolute property and free from trust, and the Fiduciary shall thereupon be released and discharged with respect thereto and the Bondholders shall look only to the Issuer for the payment of such Bonds; *provided, however*, that before being required to make any such payment to the Issuer the Fiduciary shall, at the expense of the Issuer, cause to be published at least twice, at an interval of not less than seven days between publications, in the Authorized Newspaper, a notice that said moneys remain unclaimed and that, after a date named in said notice, which date shall be not less than 30 days after the date of the first publication of such notice, the balance of such moneys then unclaimed will be returned to the Issuer.

Section 12.2 Evidence of Signatures of Bondholders and Ownership of Bonds. (a) Any request, consent, revocation of consent or other instrument which this Indenture may require or permit to be signed and executed by the Bondholders may be in one or more instruments of similar tenor, and, except as otherwise provided in Section 11.3, shall be signed or executed by such Bondholders in person or by their attorneys appointed in writing. Proof of (1) the execution of any such instrument, or of an instrument appointing any such attorney, or (2) the holding by any Person of the Bonds shall be sufficient for any purpose of this Indenture (except as otherwise therein expressly provided) if made in the following manner, or in any other manner satisfactory

to the Trustee, which may nevertheless in its discretion require further or other proof in cases where it deems the same desirable:

(i) The fact and date of the execution by any Bondholder or its attorney of such instruments may be proved by a guarantee of the signature thereon by a bank or trust company or by the certificate of any notary public or other officer authorized to take acknowledgments of deeds, that the Person signing such request or other instrument acknowledged to him the execution thereof, or by an affidavit of a witness of such execution, duly sworn to before such notary public or other officer. Where such execution is by an officer of a corporation or association or a member of a partnership, on behalf of such corporation, association or partnership, such signature, guarantee, certificate or affidavit shall also constitute sufficient proof of its authority.

(ii) The amount of Bonds transferable by delivery held by any Person executing any instrument as a Bondholder, the date of holding such Bonds, and the numbers and other identification thereof, may be proved by a certificate, which need not be acknowledged or verified, in form satisfactory to the Trustee, executed by the Trustee or by a member of a financial firm or by an officer of a bank, trust company, insurance company, or financial corporation or other depository wherever situated, showing at the date therein mentioned that such Person exhibited to such member or officer or had on deposit with such depository the Bonds described in such certificate. Such certificate may be given by a member of a financial firm or by an officer of any bank, trust company, insurance company or financial corporation or depository with respect to Bonds owned by it, if acceptable to the Trustee. In addition to the foregoing provisions, the Trustee may from time to time make such reasonable regulations as it may deem advisable permitting other proof of holding of Bonds transferable by delivery.

(b) The ownership of Bonds registered other than to bearer and the amount, numbers and other identification, and date of holding the same shall be proved by the registry books.

(c) Any request or consent by the owner of any Bond shall bind all future owners of such Bond in respect of anything done or suffered to be done by the Issuer or any Fiduciary in accordance therewith.

Section 12.3 Moneys Held for Particular Bonds. The amounts held by any Fiduciary for the payment of the interest, principal or Redemption Price due on any date with respect to particular Bonds shall, on and after such date and pending such payment, be set aside on its books and held in trust by it for the Holders of the Bonds entitled thereto.

Section 12.4 Preservation and Inspection of Documents. All documents received by any Fiduciary under the provisions of this Indenture shall, at all times during regular business hours (upon reasonable prior written notice) be subject to the inspection of the Issuer, any other Fiduciary, and any Bondholder and their agents and their representatives, any of whom may make copies thereof, subject to such reasonable regulations as such Fiduciary may from time to time determine to be required by law.

Section 12.5 Parties Interested Herein. Nothing in this Indenture expressed or implied, except for the rights and interests of the Commodity Swap Counterparty, the Interest Rate Swap Counterparty (if any) and the Commodity Supplier, as purchaser under the Receivables Purchase Provisions, as described in Section 10.3(e), and the lien on the Commodity Swap Reserve Account granted to the Commodity Swap Counterparty, is intended or shall be construed to confer upon, or to give to, any Person, other than the Issuer, the Fiduciaries, the Holders of the Bonds and any Depository, any right, remedy or claim under or by reason of this Indenture or any covenant, condition or stipulation thereof; and, except for the lien on the Commodity Swap Reserve Account granted to the Commodity Swap Counterparty as provided in Section 10.3(e), all the covenants, stipulations, promises and agreements in this Indenture contained by and on behalf of the Issuer shall be for the sole and exclusive benefit of the Issuer, the Fiduciaries, the Holders of the Bonds and any Depository.

Section 12.6 No Recourse on the Bonds. No recourse shall be had for the payment of the principal of or interest on the Bonds or for any claim based thereon or on this Indenture against any source other than the Trust Estate as provided in this Indenture, including against any member of the Commission, the Project Participant and its governing body and officers, or any Person executing the Bonds.

Section 12.7 Publication of Notice; Suspension of Publication. (a) Any publication to be made under the provisions of this Indenture in successive weeks or on successive dates may be made in each instance upon any Business Day of the week and need not be made in the same Authorized Newspaper for any or all of the successive publications but may be made in a different Authorized Newspaper.

(b) If, because of the temporary or permanent suspension of the publication or general circulation of any Authorized Newspaper or for any other reason, it is impossible or impractical to publish any notice pursuant to this Indenture in the manner herein provided, then such publication in lieu thereof as shall be made by the Issuer with the written approval of the Trustee shall constitute a sufficient publication of such notice.

Section 12.8 Severability of Invalid Provisions. If any one or more of the covenants or agreements provided in this Indenture on the part of the Issuer or any Fiduciary to be performed should be contrary to law, then such covenant or covenants or agreement or agreements shall be deemed severable from the remaining covenants and agreements, and shall in no way affect the validity of the other provisions of this Indenture.

Section 12.9 Holidays. If the date for making any payment or the last date for performance of any act or the exercising of any right, as provided in this Indenture, shall not be a Business Day, such payment may be made or act performed or right exercised on the next succeeding Business Day with the same force and effect as if done on the nominal date provided in this Indenture, and no interest shall accrue for the period after such nominal date.

Section 12.10 Notices. Except as otherwise provided herein, all notices, requests, demands and other communications required or permitted under this Indenture shall be deemed to have been

duly given if delivered or mailed, first class, postage prepaid (or sent by Electronic Means, confirmed by mail, as aforesaid), as follows:

If to the Issuer:

Northern California Energy Authority
c/o Sacramento Municipal Utility District
6301 S Street
Sacramento, CA 95817
Attention: Treasurer
Telephone:
Facsimile:
Email:

If to the Trustee, the Bond Registrar, the Paying Agent, the Custodian or the Calculation Agent:

Computershare Trust Company, N.A.
600 S. 4th St., 6th Floor
MAC N9300-060
Minneapolis, MN 55415
Attention: Corporate Trust
Telephone: (612) 316-1649
Facsimile:
Email:

or to such other Person or addresses as the respective party hereafter designates in writing to the Issuer and the Trustee.

Section 12.11 Notices to Rating Agencies. The Issuer shall provide to each Rating Agency rating the Bonds at the time: (a) notice of any amendment to this Indenture, the Commodity Purchase Agreement, any Commodity Swap, the Commodity Supply Contract or any other document relating to the Bonds or the Commodity Project; and (b) each notice provided to the Municipal Securities Rulemaking Board, through its EMMA system, pursuant to the Continuing Disclosure Undertaking executed by the Issuer in connection with the issuance of the Bonds.

Section 12.12 Counterparts. This Indenture may be executed in multiple counterparts, each of which shall be regarded for all purposes as an original; and such counterparts shall constitute but one and the same instrument.

Section 12.13 Waiver of Jury Trial. EACH PARTY HEREBY KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY PROCEEDING INVOLVING, DIRECTLY OR INDIRECTLY, ANY MATTER IN ANY WAY ARISING OUT OF, OR RELATED TO OR CONNECTED WITH THIS INDENTURE OR ANY OTHER TRANSACTION DOCUMENT, THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY, OR THE RELATIONSHIP ESTABLISHED HEREUNDER OR THEREUNDER, AND AGREES THAT ANY SUCH PROCEEDING SHALL BE TRIED BEFORE A JUDGE SITTING WITHOUT A JURY.

[Signature Pages Follow]

IN WITNESS WHEREOF, NORTHERN CALIFORNIA ENERGY AUTHORITY has caused this Indenture to be signed in its own name and on its behalf by its Treasurer and attested by its Secretary, and as evidence of its acceptance of the trusts hereby created, Computershare Trust Company, N.A., the duly authorized Trustee, has caused this Indenture to be signed in its name and on its behalf by one of its officers duly authorized, all as of the date first above written.

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By: _____
Treasurer

[SEAL]

ATTEST

Secretary

[Issuer Signature Page to Trust Indenture]

COMPUTERSHARE TRUST COMPANY, N.A., as
Trustee

By: _____
Authorized Officer

[SEAL]

[Trustee Signature Page to Trust Indenture]

EXHIBIT A

FORM OF BONDS

Unless this certificate is presented by an authorized representative of The Depository Trust Company, a New York corporation (“DTC”), to the Issuer or its agent for registration of transfer, exchange, or payment, and any certificate issued is registered in the name of Cede & Co. or in such other name as is requested by an authorized representative of DTC (and any payment is made to Cede & Co. or to such other entity as is requested by an authorized representative of DTC), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL inasmuch as the registered owner hereof, Cede & Co., has an interest herein.

REGISTERED

REGISTERED

No. RA- ____

\$ _____

UNITED STATES OF AMERICA

STATE OF CALIFORNIA

**NORTHERN CALIFORNIA ENERGY AUTHORITY
COMMODITY SUPPLY REVENUE REFUNDING BONDS,
SERIES 2024**

MATURITY DATE	ISSUE DATE	CUSIP	INTEREST RATE
	_____, 2024		

REGISTERED OWNER: CEDE & CO.

PRINCIPAL AMOUNT: _____ DOLLARS

Northern California Energy Authority (the “*Issuer*”), a joint powers authority and public entity of the State of California, acknowledges itself indebted and for value received hereby promises to pay, in the manner and from the source hereinafter provided, to the registered owner identified above, or registered assigns, on the Maturity Date stated above, unless this Bond shall have been called for redemption and payment of the Redemption Price shall have been duly made or provided for, upon presentation and surrender hereof, the principal amount identified above, and to pay, in the manner and from the source hereinafter provided, to the registered owner hereof interest on the balance of said principal amount from time to time remaining unpaid at the rate set forth above, until payment in full of such principal amount.

This Bond bears interest from the Issue Date specified above, or from the most recent interest payment date to which interest has been paid or duly provided for, at the rate per annum

set forth above, computed on the basis of a 360-day year consisting of twelve 30-day months, payable on _____ 1 and _____ 1 of each year, commencing _____ 1, 2024; provided that, if a Ledger Event occurs under the Commodity Purchase Agreement, this Bond shall bear interest at the Increased Interest Rate of 8.00% per annum during an Increased Interest Rate Period that begins on the day on which such Ledger Event occurs. If the Increased Interest Rate Period ends due to the occurrence of a Termination Payment Event, then this Bond shall bear interest at the interest rate shown above from the date of such Termination Payment Event to the associated extraordinary redemption date of the Bonds established pursuant to the Indenture.

THE BONDS DO NOT CONSTITUTE A DEBT OR LIABILITY OF THE STATE OF CALIFORNIA OR OF ANY POLITICAL SUBDIVISION THEREOF, OTHER THAN THE ISSUER, BUT SHALL BE PAYABLE SOLELY FROM THE FUNDS PROVIDED THEREFOR UNDER THE INDENTURE. THE ISSUER SHALL NOT BE OBLIGATED TO PAY THE PRINCIPAL OR THE REDEMPTION PRICE OF OR INTEREST ON THE BONDS EXCEPT FROM THE FUNDS PROVIDED THEREFOR UNDER THE INDENTURE AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OF CALIFORNIA OR OF ANY POLITICAL SUBDIVISION THEREOF, INCLUDING THE ISSUER, IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OR REDEMPTION PRICE OF OR INTEREST ON THE BONDS. THE ISSUANCE OF THE BONDS SHALL NOT DIRECTLY OR INDIRECTLY OR CONTINGENTLY OBLIGATE THE STATE OF CALIFORNIA OR ANY POLITICAL SUBDIVISION THEREOF TO LEVY OR TO PLEDGE ANY FORM OF TAXATION OR TO MAKE ANY APPROPRIATION FOR THEIR PAYMENT. THE ISSUER HAS NO TAXING POWER.

This Bond and the issue of Bonds of which it is a part are issued in conformity with and after full compliance with the Constitution of the State of California and pursuant to the provisions of the Act as defined in the Indenture and all other laws applicable thereto.

This Bond is a special, limited obligation of the Issuer and is one of the Commodity Supply Revenue Refunding Bonds, Series 2024 (the “*Bonds*”) under and by virtue of the Act and pursuant to an Amended and Restated Trust Indenture, dated as of _____ 1, 2024 (the “*Indenture*”), between the Issuer and Computershare Trust Company, N.A., as trustee (the “*Trustee*”), for the purpose of providing funds to pay the Cost of Acquisition of the Issuer’s Commodity Project. The aggregate principal amount of Bonds issued pursuant to the Indenture is limited to \$ _____. This Bond is one of the Series of Bonds designated as “Commodity Supply Revenue Refunding Bonds, Series 2024” dated as of the Issue Date identified above.

All Bonds issued and to be issued under the Indenture are and will be equally and ratably secured by the pledge and covenants made therein, except as otherwise expressly provided or permitted in or pursuant to the Indenture.

Copies of the Indenture are on file at the office of the Issuer in Sacramento, California, and at the designated corporate trust office of Computershare Trust Company, N.A., in _____, _____, and reference to the Indenture and the Act is made for a description of the pledge and covenants securing the Bonds, the nature, manner and extent of enforcement of such pledge and covenants, the terms and conditions upon which the Bonds were issued thereunder, and a

statement of the rights, duties, immunities and obligations of the Issuer and of the Trustee. Such pledge and other obligations of the Issuer under the Indenture may be discharged at or prior to the maturity or redemption of the Bonds upon the making of provision for the payment thereof on the terms and conditions set forth in the Indenture.

Except as otherwise provided herein and unless the context clearly indicates otherwise, words and phrases used herein shall have the same meanings as such words and phrases in the Indenture.

The Issuer has established a book-entry system of registration for the Bonds. Except as specifically provided otherwise in the Indenture, a Securities Depository (or its nominee) will be the registered owner of this Bond. By acceptance of a confirmation of purchase, delivery or transfer, the Beneficial Owner of this Bond shall be deemed to have agreed to this arrangement. The Securities Depository (or its nominee), as registered owner of this Bond, shall be treated as the owner of it for all purposes.

The Issuer will pay the principal, Purchase Price and Redemption Price of and interest on this Bond solely from the Revenues and the other funds and amounts pledged therefor pursuant to the Indenture. Interest will accrue on the unpaid portion of the principal of this Bond from the last date to which interest was paid or duly provided for or, if no interest has been paid or duly provided for, from the date of the original issuance of the Bonds, until the entire principal amount of this Bond is paid or duly provided for, and such interest shall be paid in the manner and on the Interest Payment Dates specified in the Indenture.

The Bonds are subject to acceleration, redemption and purchase prior to maturity upon the circumstances, at the times, in the amounts, upon payment of the amounts, with the notice, upon the other terms and provisions and with the effect set forth in the Indenture.

This Bond may be transferred or exchanged as provided in the Indenture. The Issuer and the Trustee may treat and consider the person in whose name this Bond is registered as the Holder and the absolute owner hereof for the purpose of receiving payment of, or on account of, the principal, purchase price or Redemption Price hereof and interest due hereon and for all other purposes whatsoever.

To the extent and in the respects permitted by the Indenture, the Indenture may be modified or amended by action on behalf of the Issuer taken in the manner and subject to the conditions and exceptions prescribed in the Indenture.

The Holder or Beneficial Owner of this Bond shall have no right to enforce the provisions of the Indenture or to institute action to enforce the pledge or covenants made therein or to take any action with respect to an Event of Default under the Indenture or to institute, appear in, or defend any suit or other proceeding with respect thereto, except as provided in the Indenture.

It is hereby certified and recited that all conditions, acts and things required by the Constitution or statutes of the State of California or by the Act or the Indenture to exist, to have happened or to have been performed precedent to or in the issuance of this Bond exist, have

happened and have been performed and that the issue of Bonds, together with all other indebtedness of the Issuer, is within every debt and other limit prescribed by said Constitution and statutes.

This Bond shall not be valid until the Certificate of Authentication hereon shall have been signed by the Trustee.

IN WITNESS WHEREOF, NORTHERN CALIFORNIA ENERGY AUTHORITY has caused this Bond to be signed in its name and on its behalf by the manual or facsimile signature of its President & CEO, and its corporate seal to be impressed or printed hereto, and attested by the manual or facsimile signature of its Secretary, all as of the issue date specified above.

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By: _____
Treasurer

ATTEST

Secretary

[SEAL]

[FORM OF CERTIFICATE OF AUTHENTICATION]

This Bond is one of the Bonds described in the within mentioned Indenture and is one of the Commodity Supply Revenue Refunding Bonds, Series 2024, of NORTHERN CALIFORNIA ENERGY AUTHORITY.

Date of registration and authentication: _____, 2024.

COMPUTERSHARE TRUST COMPANY, N.A., as
Trustee

By: _____
Authorized Officer

Customary abbreviations may be used in the name of a Bondholder or an assignee, such as TEN COM (= tenants in common), TEN ENT (= tenants by the entirety), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian) and U/T/M/A (= Uniform Transfers to Minors Act).

The following abbreviations, when used in the inscription on the face of the within Bond, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM	—	as tenants in common	UNIF TRAN MIN ACT
TEN ENT	—	as tenants by the entirety	_____ Custodian _____
JT TEN	—	as joint tenants with right	(Cust) (Minor)

of survivorship and not as under Uniform Transfers to Minors Act of

tenants in common _____
(State)

Additional abbreviations may also be used though not in list above.

[FORM OF ASSIGNMENT]

For Value Received, the undersigned sells, assigns and transfers unto _____

PLEASE INSERT SOCIAL SECURITY OR
OTHER IDENTIFYING NUMBER OF ASSIGNEE

(Name and Address of Assignee)

the within Bond of Northern California Energy Authority, and hereby irrevocably constitutes and appoints _____

attorney to transfer the said Bond on the books kept for registration thereof with full power of substitution in the premises.

Date: _____

SIGNATURE GUARANTEED:

NOTICE: Signature(s) must be guaranteed by an “eligible guarantor institution” meeting the requirements of the Trustee, which requirements include membership or participation in STAMP or such other “signature guarantee program” as may be determined by the Trustee in addition to, or in substitution for, STAMP, all in accordance with the Securities and Exchange Act of 1934, as amended.

NOTICE: The signature to this assignment must correspond with the name as it appears upon the face of the within Bond in every particular, without alteration or enlargement or any change whatever.

EXHIBIT B

FORM OF INDEX RATE DETERMINATION CERTIFICATE

Re: Northern California Energy Authority Commodity Supply Revenue Refunding Bonds, Series 2024 (the “*Bonds*”)

Reference is made to Section 2.9 of the Amended and Restated Trust Indenture, dated as of _____ 1, 2024 (the “*Indenture*”), between Northern California Energy Authority (the “*Issuer*”) and Computershare Trust Company, N.A., as trustee (the “*Trustee*”), relating to the above-captioned Bonds. Capitalized terms used and not otherwise defined herein have the meanings assigned to them in the Indenture.

The undersigned Authorized Representative of the Issuer hereby notifies the Trustee as follows with respect to the Index Rate Period commencing on the date hereof:

(i) the Index Rate shall be the [SIFMA/SOFR] Index Rate and the Index Rate Period shall be _____;

(ii) if the Index Rate shall be the SOFR Index Rate, (A) the SOFR Index shall be the “Secured Overnight Financing Rate” reported on the NY Federal Reserve’s Website, or reported by any successor to the Federal Reserve Bank of New York as administrator of such Secured Overnight Financing Rate, as of 3:00 p.m. on each SOFR Publish Date representing the SOFR Index as of the third Business Day preceding the [Initial Issue Date][Index Rate Reset Date], which will be used to calculate interest for the SOFR Effective Period beginning on such [Initial Issue Date][Index Rate Reset Date] (the “SOFR Effective Date”) [(for example, for purposes of determining the SOFR Index for a SOFR Effective Date of Thursday, February 15, 2024, the Calculation Agent uses the SOFR Index published on the SOFR Publish Date of Tuesday, February 13, 2024, which is the SOFR Index for the SOFR Lookback Date of Monday, February 12, 2024)], (B) the Applicable Factor, as determined by the Underwriter or the Remarketing Agent, as the case may be, shall be ___% of the SOFR Index and (C) the Applicable Spread, as determined by the Underwriter or the Remarketing Agent, as the case may be, shall be ____ basis points (___%).

(iii) if, during any [SIFMA/SOFR] Index Rate Period, the [SIFMA/SOFR] Index Rate is not reported by, or otherwise ceases to be available from, the relevant source, the substitute or replacement Index Rate, as determined by the Issuer, for the Index Rate Period shall be the substitute determined in writing by the Issuer;

(iv) the Index Rate Tender Date shall be _____;

(v) the Interest Payment Date[s] shall be _____;

(vi) the Index Rate Reset Date[s] shall be _____;

(vii) for a Series of Bonds bearing interest at the SIFMA Index Rate, the Index Rate Reset Date[s] shall be _____ [Thursday of each week, or if the SIFMA Index is not issued on Wednesday of such week, the Business Day next succeeding the day on which the SIFMA Index for such week is issued]; and

(viii) for a Series of Bonds bearing interest at the SOFR Index Rate, the SOFR Effective Date shall be [each Business Day][[_____]], 20[_____]].

IN WITNESS WHEREOF, I have set forth my hand this ____ day of _____.

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By: _____
Name: _____
Title: _____

Please sign below to signify your acknowledgement of receipt of this Certificate and, as to the Underwriter or the Remarketing Agreement, as the case may be, your agreement with the terms set forth herein.

ACKNOWLEDGED AND RECEIVED:

COMPUTERSHARE TRUST COMPANY, N.A.,
as Trustee

By: _____
Name: _____
Title: _____

ACKNOWLEDGED, RECEIVED AND AGREED TO:

as Underwriter

By: _____
Name: _____
Title: _____

EXHIBIT C

FORM OF INDEX RATE CONTINUATION NOTICE

Re: Northern California Energy Authority Commodity Supply Revenue Refunding Bonds, Series 2024 (the “*Bonds*”)

Reference is made to Section 2.9 of the Amended and Restated Trust Indenture, dated as of _____ 1, 2024 (the “*Indenture*”), between Northern California Energy Authority (the “*Issuer*”) and Computershare Trust Company, N.A., as trustee (the “*Trustee*”), relating to the above-captioned Bonds. Capitalized terms used and not otherwise defined herein have the meanings assigned to them in the Indenture.

The undersigned Authorized Representative of the Issuer hereby notifies the Trustee as follows with respect to the Index Rate Period commencing on the date hereof:

(i) the Index Rate shall be the [SIFMA/SOFR] Index Rate and the Index Rate Period shall be _____;

(ii) if the Index Rate shall be the SOFR Index Rate, (A) the SOFR Index shall be the “Secured Overnight Financing Rate” reported on the NY Federal Reserve’s Website, or reported by any successor to the Federal Reserve Bank of New York as administrator of such Secured Overnight Financing Rate, as of 3:00 p.m. on each SOFR Publish Date representing the SOFR Index as of the third Business Day preceding the [Initial Issue Date][Index Rate Reset Date], which will be used to calculate interest for the SOFR Effective Period beginning on such [Initial Issue Date][Index Rate Reset Date] (the “SOFR Effective Date”) (for example, for purposes of determining the SOFR Index for a SOFR Effective Date of Thursday, February 15, 2024, the Calculation Agent uses the SOFR Index published on the SOFR Publish Date of Tuesday, February 13, 2024, which is the SOFR Index for the SOFR Lookback Date of Monday, February 12, 2024), and (B) the Applicable Factor, as determined by the Underwriter or the Remarketing Agent, as the case may be, shall be _____ % of the SOFR Index.

(iii) the Applicable Spread for each Maturity Date, as determined by the Underwriter or the Remarketing Agent, as the case may be, shall be as follows:

MATURITY DATE	APPLICABLE SPREAD	MATURITY DATE	APPLICABLE SPREAD
---------------	-------------------	---------------	-------------------

(iv) if, during any SIFMA Index Rate Period, the SIFMA Index Rate is not reported by, or otherwise ceases to be available from, the relevant source, the substitute or replacement Index Rate, as determined by the Issuer, for the Index Rate Period shall be the substitute determined in writing by the Issuer;

- (v) [the first day of the new Index Rate Period shall be _____;]
- (vi) the Index Rate Tender Date shall be _____;
- (vii) if a Liquidity Facility is to be in effect for the Bonds during the new Index Rate Period, the Liquidity Facility Provider shall be _____; and
- (viii) the Index Rate Reset Date[s] shall be _____;
- (ix) for a Series of Bonds bearing interest at the SIFMA Index Rate, the Index Rate Reset Date[s] shall be [_____] [Thursday of each week, or if the SIFMA Index is not issued on Wednesday of such week, the Business Day next succeeding the day on which the SIFMA Index for such week is issued]; and
- (x) for a Series of Bonds bearing interest at the SOFR Index Rate, the SOFR Effective Date shall be [each Business Day][[_____] , 20[____]].

IN WITNESS WHEREOF, I have set forth my hand this ____ day of _____.

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By: _____
Name: _____
Title: _____

Please sign below to signify your acknowledgement of receipt of this Notice and, as to the Remarketing Agreement, your agreement with the terms set forth herein.

ACKNOWLEDGED AND RECEIVED:

COMPUTERSHARE TRUST COMPANY, N.A.,
as Trustee

By: _____
Name: _____
Title: _____

ACKNOWLEDGED, RECEIVED AND AGREED TO:

[_____] ,
as Remarketing Agent

By: _____
Name: _____
Title: _____

EXHIBIT D

DIRECTION OF NORTHERN CALIFORNIA ENERGY AUTHORITY TO OPTIONALLY REDEEM COMMODITY SUPPLY REVENUE REFUNDING BONDS, SERIES 2024

To: Computershare Trust Company, N.A., as Trustee (the “Trustee”)

DIRECTION IS HEREBY GIVEN BY NORTHERN CALIFORNIA ENERGY AUTHORITY (the “Issuer”) to the Trustee for the Issuer’s Commodity Supply Revenue Refunding Bonds, Series 2024 (the “Bonds”) issued pursuant to the Amended and Restated Trust Indenture, dated as of _____ 1, 2024 between the Issuer and the Trustee (the “Indenture”), to call the Bonds for redemption on _____, ____ (the “Redemption Date”) at a redemption price (the “Redemption Price”), calculated by a quotation agent selected by the Issuer, equal to [FOR REDEMPTIONS UNDER SECTION 4.3(a): the greater of (a) the Amortized Value of the Series 2024 Bonds as of the Redemption Date, plus accrued interest to the Redemption Date, or (b) the sum of the present values of the remaining unpaid payments of principal and interest to be paid on the Series 2024 Bonds to be redeemed from and including the Redemption Date (not including any portion of the interest accrued and unpaid as of the redemption date) to the earlier of the stated maturity date of such Series 2024 Bonds or the Series 2024 Mandatory Purchase Date, discounted to the Redemption Date on a semiannual basis at a discount rate equal to the Applicable Tax-Exempt Municipal Bond Rate for such Bonds minus 0.25% per annum, plus accrued interest to the Redemption Date]; OR [FOR REDEMPTIONS UNDER SECTION 4.3(b) the Amortized Value of the Series 2024 Bonds as of the Redemption Date, plus \$0.____ per \$1,000 of the principal amount thereof plus accrued interest to the Redemption Date, provided that, if the optional redemption date is the Mandatory Purchase Date, the Redemption Price shall be the principal amount thereof plus accrued and unpaid interest to the date of redemption].

“*Amortized Value*” means, with respect to any Series 2024 Bond to be redeemed when a Fixed Rate Period is in effect with respect to such Bond, the principal amount of such Bond multiplied by the price of such Bond expressed as a percentage, calculated by a major market maker in municipal securities, as the quotation agent, selected by the Issuer, based on the industry standard method of calculating bond prices (as such industry standard prevails on the date of delivery of the Bonds), with a delivery date equal to the date of redemption, a maturity date equal to the earlier of (a) the stated maturity date of such Bond or (b) the Fixed Rate Tender Date of such Bond and a yield equal to such Bond’s original reoffering yield, which, in the case of the Series 2024 Bonds and certain dates, produces the amounts for all of the Series 2024 Bonds set forth in Schedule IV attached to the Indenture.

“*Applicable Tax-Exempt Municipal Bond Rate*” means, for the Series 2024 Bonds of any maturity, the “Comparable AAA General Obligations” yield curve rate for the year of such maturity or Mandatory Purchase Date, as applicable, as published by Refinitiv Global Markets, Inc. one Business Day prior to the date of this Notice of Conditional Optional Redemption. If no such yield curve rate is established for the applicable year, the “Comparable AAA General Obligations” yield curve rate for the two published maturities most closely corresponding to the applicable year shall be determined, and the Applicable Tax-Exempt Municipal Bond Rate will be

interpolated or extrapolated from those yield curve rates on a straight-line basis. This rate is made available daily by Refinitiv Global Markets, Inc. and is available to its subscribers through the internet address: www.tm3.com. In calculating the Applicable Tax-Exempt Municipal Bond Rate, should Refinitiv Global Markets, Inc. no longer publish the “Comparable AAA General Obligations” yield curve rate, then the Applicable Tax-Exempt Municipal Bond Rate shall equal the Consensus Scale yield curve rate for the applicable year. The Consensus Scale yield curve rate is made available daily by Municipal Market Analytics and is available to its subscribers through its internet address: www.mma-research.com. In the further event Municipal Market Analytics no longer publishes the Consensus Scale, the Applicable Tax-Exempt Municipal Bond Rate shall be determined by a major market maker in municipal securities, as the quotation agent, based upon the rate per annum equal to the annual yield to maturity, calculated using semi-annual compounding, of those tax-exempt general obligation bonds rated in the highest Rating Category by Moody’s and S&P with a maturity date equal to the stated maturity date or Mandatory Purchase Date, as applicable, of such Bonds having characteristics (other than the ratings) most comparable to those of such Bonds in the judgment of the quotation agent. The quotation agent’s determination of the Applicable Tax-Exempt Municipal Bond Rate shall be final and binding in the absence of manifest error on all parties and may be conclusively relied upon in good faith by the Trustee.

The quotation agent selected by the Issuer is _____. _____ shall calculate the Redemption Price and deliver it to you [one] Business Day prior to the date that notice of redemption is required to be given pursuant to Section 4.4 of the Indenture.

The Issuer hereby directs you to cause notice of such optional redemption to be given pursuant to the provisions set forth in Section 4.4 of the Indenture to the registered owner of each Bond being redeemed, at its address as it appears on the bond registration books of the Trustee or at such address as such owner may have filed with the Trustee for that purpose, as of the Regular Record Date (as defined in the Indenture), such notice to be mailed by first-class mail, postage prepaid, at least _____ () days prior to the Redemption Date, and such notice to be in substantially the form attached as Exhibit A hereto.

Dated: _____.

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By: _____
Authorized Officer

ACKNOWLEDGED

COMPUTERSHARE TRUST COMPANY, N.A.,
as Trustee

By: _____
Name: _____
Title: _____

APPENDIX A

NOTICE OF CONDITIONAL OPTIONAL REDEMPTION OF NORTHERN CALIFORNIA ENERGY AUTHORITY COMMODITY SUPPLY REVENUE REFUNDING BONDS, SERIES 2024

NOTICE IS HEREBY GIVEN to the holders of NORTHERN CALIFORNIA ENERGY AUTHORITY Commodity Supply Revenue Refunding Bonds, Series 2024 (the “*Bonds*”), which were issued on January 18, 2024, that the Bonds listed below have been called for redemption prior to maturity on _____, 20[___] (the “*Redemption Date*”), at a redemption price (the “*Redemption Price*”), calculated by a quotation agent selected by the Issuer, equal to (a) [FOR FIXED RATE BONDS: [FOR REDEMPTIONS UNDER SECTION 4.3(a): the greater of (i) the Amortized Value of the Series 2024 Bonds as of the Redemption Date, plus accrued interest to the Redemption Date, or (ii) the sum of the present values of the remaining unpaid payments of principal and interest to be paid on the Series 2024 Bonds to be redeemed from and including the Redemption Date (not including any portion of the interest accrued and unpaid as of the redemption date) to the earlier of the stated maturity date(s) of such Series 2024 Bonds or the Series 2024 Mandatory Purchase Date, discounted to the Redemption Date on a semiannual basis at a discount rate equal to the Applicable Tax-Exempt Municipal Bond Rate for the Series 2024 Bonds minus 0.25% per annum, plus accrued interest to the Redemption Date] OR [FOR REDEMPTIONS UNDER SECTION 4.3(b): the Amortized Value of the Series 2024 Bonds as of the first Business Day of the month of redemption, plus \$0__ per \$1,000 of the principal amount thereof plus accrued interest to the Redemption Date].

“*Amortized Value*” means, with respect to any Series 2024 Bond to be redeemed when a Fixed Rate Period is in effect with respect to such Bond, the principal amount of such Bond multiplied by the price of such Bond expressed as a percentage, calculated by a major market maker in municipal securities, as the quotation agent, selected by the Issuer, based on the industry standard method of calculating bond prices (as such industry standard prevails on the date of delivery of the Bonds), with a delivery date equal to the date of redemption, a maturity date equal to the earlier of (a) the stated maturity date of such Bond or (b) the Fixed Rate Tender Date of such Bond and a yield equal to such Bond’s original reoffering yield, which, in the case of the Series 2024 Bonds and certain dates, produces the amounts for all of the Series 2024 Bonds set forth in Schedule IV attached to the Indenture.

“*Applicable Tax-Exempt Municipal Bond Rate*” means, for the Series 2024 Bonds of any maturity, the “Comparable AAA General Obligations” yield curve rate for the year of such maturity or Mandatory Purchase Date, as applicable, as published by Refinitiv Global Markets, Inc. one Business Day prior to the date of this Notice of Conditional Optional Redemption. If no such yield curve rate is established for the applicable year, the “Comparable AAA General Obligations” yield curve rate for the two published maturities most closely corresponding to the applicable year shall be determined, and the Applicable Tax-Exempt Municipal Bond Rate will be interpolated or extrapolated from those yield curve rates on a straight-line basis. This rate is made available daily by Refinitiv Global Markets, Inc. and is available to its subscribers through the internet address: www.tm3.com. In calculating the Applicable Tax-Exempt Municipal Bond Rate,

should Refinitiv Global Markets, Inc. no longer publish the “Comparable AAA General Obligations” yield curve rate, then the Applicable Tax-Exempt Municipal Bond Rate shall equal the Consensus Scale yield curve rate for the applicable year. The Consensus Scale yield curve rate is made available daily by Municipal Market Analytics and is available to its subscribers through its internet address: www.mma-research.com. In the further event Municipal Market Analytics no longer publishes the Consensus Scale, the Applicable Tax-Exempt Municipal Bond Rate shall be determined by a major market maker in municipal securities, as the quotation agent, based upon the rate per annum equal to the annual yield to maturity, calculated using semi-annual compounding, of those tax-exempt general obligation bonds rated in the highest Rating Category by Moody’s and S&P with a maturity date equal to the stated maturity date or Mandatory Purchase Date, as applicable, of such Bonds having characteristics (other than the ratings) most comparable to those of such Bonds in the judgment of the quotation agent. The quotation agent’s determination of the Applicable Tax-Exempt Municipal Bond Rate shall be final and binding in the absence of manifest error on all parties and may be conclusively relied upon in good faith by the Trustee.

CUSIP NUMBER ¹	MATURITY DATE	INTEREST RATE %	OUTSTANDING PRINCIPAL AMOUNT \$	PRINCIPAL AMOUNT TO BE REDEEMED \$	REDEMPTION DATE
------------------------------	------------------	-----------------------	--	--	--------------------

On the Redemption Date, there shall become due and payable on the Bonds to be redeemed, upon presentation and surrender of such Bonds as set forth below, the above-mentioned Redemption Price, together with interest accrued and unpaid on the Bonds to be redeemed to such Redemption Date and, if payment has been made as provided for, then interest on the Bonds to be redeemed shall cease to accrue from and after the Redemption Date.

The redemption of the Bonds is subject to the condition that the Redemption Price will be due and payable on the Redemption Date only if moneys sufficient to accomplish such redemption are held by the Trustee on the scheduled Redemption Date.

On [insert redemption date], the Bonds to be redeemed shall be surrendered for redemption to:

¹ No representation is made as to the correctness of the CUSIP number either as printed on the Bonds or as contained in this notice and an error in a CUSIP number as printed on such Bonds or as contained in this notice shall not affect the validity of the proceedings for redemption.

FIRST CLASS/
REGISTERED/CERTIFIED

EXPRESS DELIVERY ONLY

BY HAND ONLY

Any inquiries can be made by calling the Customer Service number (800) _____.

The method of delivery of the Bonds to be redeemed is at the option and risk of the holder, but, if mail is used, registered mail, properly insured, with receipt requested, is recommended.

By: COMPUTERSHARE TRUST COMPANY,
N.A., as Trustee

By: _____
Name: _____
Title: _____

Dated: _____, _____

EXHIBIT E

**DIRECTION OF NORTHERN CALIFORNIA ENERGY AUTHORITY TO REDEEM
COMMODITY SUPPLY REVENUE REFUNDING BONDS, SERIES 2024
(EXTRAORDINARY REDEMPTION)**

To: Computershare Trust Company, N.A., as Trustee (the “Trustee”)

DIRECTION IS HEREBY GIVEN by NORTHERN CALIFORNIA ENERGY AUTHORITY (the “Issuer”) to the Trustee for the Issuer’s Commodity Supply Revenue Refunding Bonds, Series 2024 (the “Bonds”) issued pursuant to the Amended and Restated Trust Indenture, dated as of _____, 2024 between the Issuer and the Trustee (the “Indenture”), to [IF AN EARLY TERMINATION PAYMENT DATE HAS OCCURRED: call the Bonds for redemption] [IF A CONDITIONAL NOTICE OF REDEMPTION WILL BE GIVEN IN THE EVENT THAT A FAILED REMARKETING MAY CAUSE AN EARLY TERMINATION PAYMENT DATE: give a conditional notice of redemption of the Bonds] on _____, 20[___](the “Redemption Date”), which is the first day of the Month following the Early Termination Payment Date (as defined in the Indenture), [(IF A CONDITIONAL NOTICE WILL BE GIVEN: in the event that an Early Termination Payment Date is established prior to such Redemption Date)], at a redemption price (the “Redemption Price”) equal to (a) [FOR FIXED RATE BONDS: the Amortized Value of the Series 2024 Bonds as of the Redemption Date, plus accrued interest to the Redemption Date], and (b) [FOR VARIABLE RATE BONDS: 100% of the principal amount of the Series 2024 Bonds, plus accrued interest to the Redemption Date].

[IF AN EARLY TERMINATION PAYMENT DATE ALREADY HAS OCCURRED: Such redemption is required by Section 4.1 of the Indenture as the result of the establishment of [DATE] as the Early Termination Payment Date.] [IF A CONDITIONAL NOTICE OF REDEMPTION IS BEING GIVEN IN CASE A FAILED REMARKETING MAY CAUSE AN EARLY TERMINATION PAYMENT DATE TO OCCUR PRIOR TO A MANDATORY PURCHASE DATE: Such redemption will be required by Section 4.1 of the Indenture if a Failed Remarketing (as defined in the Indenture) results in the establishment of an Early Termination Payment Date.] If the Bonds are not redeemed pursuant to such Section 4.1 of the Indenture, the Bonds shall be subject to mandatory tender for purchase on the Series 2024 Mandatory Purchase Date.

The Issuer or a quotation agent selected by the Issuer shall calculate the Redemption Price and deliver it to you at least one Business Day prior to [the Redemption Date].

The Issuer hereby directs you to cause [a conditional] notice of to the registered owner of each Bond being redeemed, at its address as it appears on the bond registration books of the Trustee or at such address as such owner may have filed with the Trustee for that purpose, as of the Regular Record Date (as defined in the Indenture), such notice to be mailed by first-class mail, postage prepaid, at least _____ () days prior to the Redemption Date, and such notice to be in substantially the form attached as Appendix A hereto.

Dated: _____ such mandatory redemption to be given pursuant to the provisions set forth in the Indenture

NORTHERN CALIFORNIA ENERGY AUTHORITY

By: _____
Authorized Officer

ACKNOWLEDGED

COMPUTERSHARE TRUST COMPANY, N.A.,
as Trustee

By: _____
Name: _____
Title: _____

APPENDIX A

NOTICE OF CONDITIONAL MANDATORY REDEMPTION OF NORTHERN CALIFORNIA ENERGY AUTHORITY COMMODITY SUPPLY REVENUE REFUNDING BONDS, SERIES 2024 (EXTRAORDINARY REDEMPTION)

NOTICE IS HEREBY GIVEN to the holders of the following NORTHERN CALIFORNIA ENERGY AUTHORITY (the “*Issuer*”) Commodity Supply Revenue Refunding Bonds, Series 2024 (the “*Bonds*”), which were issued on _____, 2024 pursuant to the Amended and Restated Trust Indenture, dated as of _____ 1, 2024 between the Issuer and the Trustee (the “*Indenture*”), that the Bonds listed below have been conditionally called for redemption prior to maturity on _____, 20[___], the first day of the Month following the Early Termination Payment Date (the “*Redemption Date*”), pursuant to Section 4.1 of the Indenture, at a redemption price (the “*Redemption Price*”) equal to (a) [FOR FIXED RATE BONDS: the Amortized Value of the Series 2024 Bonds as of the Redemption Date[, as set forth in Schedule IV attached to the Indenture with respect to all of the Bonds], plus accrued interest to the Redemption Date], and (b) [FOR VARIABLE RATE BONDS: 100% of the principal amount of the Series 2024 Bonds, plus accrued interest to the Redemption Date].

Such redemption is required by Section 4.1 of the Indenture as the result of the establishment of [DATE] as the Early Termination Payment Date (as defined in the Indenture) in the event that an Early Termination Payment Date (as defined in the Indenture) occurs as a result of a Failed Remarketing (as defined in the Indenture) prior to the Mandatory Purchase Date scheduled to occur on _____, 20__.

On the Redemption Date, there shall become due and payable on the Bonds to be redeemed, upon presentation and surrender of such Bonds as set forth below, the above-mentioned Redemption Price, together with interest accrued and unpaid on the Bonds to be redeemed to such Redemption Date and, if payment has been made as provided for, then interest on the Bonds to be redeemed shall cease to accrue from and after the Redemption Date.

[The Redemption Date is also a Mandatory Purchase Date under the Indenture. The redemption of the Bonds is subject to the condition that the Trustee has not received, by noon New York City time on the fifth Business Day preceding the Redemption Date, the Purchase Price of the Bonds required to be purchased on the Mandatory Purchase Date. If the full amount of the Purchase Price has been received by the Trustee by noon New York City time on the fifth Business Day preceding the Mandatory Purchase Date, the Trustee shall withdraw this conditional notice of redemption and the Bonds shall be purchased pursuant to Section 4.13 of the Indenture on the Redemption Date rather than redeemed.]

On [insert redemption date], the Bonds to be redeemed shall be surrendered for redemption to:

FIRST
CLASS/REGISTERED/CERTIFIED EXPRESS DELIVERY ONLY BY HAND ONLY

Any inquiries can be made by calling the Customer Service number (800) _____.

The method of delivery of the Bonds to be redeemed is at the option and risk of the holder, but, if mail is used, registered mail, properly insured, with receipt requested, is recommended.

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By: _____

COMPUTERSHARE TRUST COMPANY, N.A., as
Trustee

By: _____

Name: _____

Title: _____

Dated: _____, 20[]

SCHEDULE I
INITIAL PROJECT PARTICIPANT
SMUD

Schedule I-1

SCHEDULE II

SCHEDULED DEBT SERVICE DEPOSITS

DATE	SCHEDULED MONTHLY DEPOSIT	INTEREST EARNINGS	CUMULATIVE SCHEDULED BALANCE
	\$	\$	\$

DATE	SCHEDULED MONTHLY DEPOSIT	INTEREST EARNINGS	CUMULATIVE SCHEDULED BALANCE
------	------------------------------	----------------------	---------------------------------

Schedule II-2

4147-6340-3086.5
40118-2

DATE	SCHEDULED MONTHLY DEPOSIT	INTEREST EARNINGS	CUMULATIVE SCHEDULED BALANCE
------	------------------------------	----------------------	---------------------------------

Schedule II-3

4147-6340-3086.5
40118-2

SCHEDULE III

TERMS OF ISSUER COMMODITY SWAP

For each Month beginning with [Month] 20__ and ending with [Month] 20__, the Issuer will determine for each “Primary Delivery Point” as set forth on Exhibit A to the Commodity Purchase Agreement, (i) the price under the “Monthly Index” (as set forth on such Exhibit A), (ii) the difference (which may be positive or negative) between such Monthly Index price and the fixed price set forth in the Issuer Commodity Swap, and (iii) the product of such difference and the Monthly gas and electricity quantity for such Primary Delivery Point as set forth on Exhibit A to the Commodity Purchase Agreement.

The Issuer will then calculate a net settlement amount for all Primary Delivery Points for such Month due by or to the Issuer under the Issuer Commodity Swap that aggregates the amounts determined under clause (iii) above.

All payments from the Issuer or the Commodity Swap Counterparty will be due on each “Payment Date” under the Issuer Commodity Swap (which shall be the 25th day of the Month following the Month of natural gas and electricity deliveries or, if such day is not a Business Day under the Issuer Commodity Swap, then the next following Business Day).

SCHEDULE IV

AMORTIZED VALUE OF THE SERIES 2024 BONDS

<u>REDEMPTION DATE</u>	<u>REDEMPTION PRICE</u>	<u>REDEMPTION DATE</u>	<u>REDEMPTION PRICE</u>
	\$		\$

**DRAFT AMENDED AND RESTATED PREPAID COMMODITY
SALES AGREEMENT**

AMENDED & RESTATED PREPAID COMMODITY SALES AGREEMENT

between

ARON ENERGY PREPAY 33 LLC

and

NORTHERN CALIFORNIA ENERGY AUTHORITY

Dated as of [____], 2024

TABLE OF CONTENTS

	<u>Page</u>
Article I. Definitions.....	1
Section 1.1 Defined Terms	1
Section 1.2 Definitions; Interpretation.....	15
Article II. Execution Date and Delivery Period	15
Section 2.1 Execution Date; Delivery Period	15
Section 2.2 Termination by Seller Prior to Prepayment	15
Section 2.3 J. Aron as Agent.....	15
Article III. Sale And Purchase.....	16
Section 3.1 Sale and Purchase of Commodities.....	16
Section 3.2 Prepayment	16
Section 3.3 Switch Date to Commence Electricity Deliveries	17
Section 3.4 Sale and Purchase of Commodities.....	17
Article IV. Failure to Deliver or Take Commodities	17
Section 4.1 Seller’s Failure to Deliver the Contract Quantity (Not Due to Force Majeure).....	17
Section 4.2 Buyer’s Failure to Take the Contract Quantity (Not Due to Force Majeure).....	19
Section 4.3 Failure to Deliver or Take Due to Force Majeure.....	20
Section 4.4 Make-Up Gas Deliveries in Lieu of Payment.....	20
Section 4.5 Sole Remedies.....	20
Section 4.6 Limitations	20
Article V. Transportation and Delivery; Communications	21
Section 5.1 Delivery Point	21
Section 5.2 Responsibility for Transportation; Permits.....	22
Section 5.3 Title and Risk of Loss	22
Section 5.4 Daily Flow Rates.....	23
Section 5.5 Imbalances	23
Section 5.6 Communications Protocol.....	23
Section 5.7 Gas Quality and Measurement.....	23
Section 5.8 Assigned Products.....	24
Article VI. Gas Assignment Agreement.....	24

TABLE OF CONTENTS
(continued)

	<u>Page</u>
Section 6.1 Upstream Supply Contract Assignments	24
Section 6.2 Adjustments to Contract Quantity	24
Article VII. Commodity Remarketing	24
Section 7.1 Commodity Remarketing.....	24
Section 7.2 Delegation of Authority	25
Article VIII. Representations and Warranties.....	25
Section 8.1 Representations and Warranties.....	25
Section 8.2 Additional Representations and Warranties of Buyer	26
Section 8.3 Funding Agreement	27
Section 8.4 Warranty of Title.....	27
Section 8.5 Disclaimer of Warranties	27
Article IX. Taxes	28
Article X. Waiver of Jury Trial	28
Article XI. Force Majeure.....	28
Section 11.1 Applicability of Force Majeure.....	28
Section 11.2 Settlement of Labor Disputes.....	29
Article XII. Governmental Rules and Regulations.....	29
Section 12.1 Compliance with Laws	29
Section 12.2 Contests.....	29
Section 12.3 Defense of Agreement	29
Article XIII. Assignment	29
Article XIV. Payments.....	30
Section 14.1 Monthly Statements	30
Section 14.2 Payment.....	31
Section 14.3 Payment of Disputed Amounts	32
Section 14.4 Late Payment	32
Section 14.5 Audit; Adjustments	32
Section 14.6 Netting.....	32
Article XV. PPA Assignment Agreements.....	33
Section 15.1 Assignment by Project Participant.....	33

TABLE OF CONTENTS
(continued)

	<u>Page</u>
Section 15.2	Adjustments to Swaps..... 33
Section 15.3	Early Termination of Assignment Period 33
Article XVI. Notices	33
Article XVII. Default; Remedies; Termination.....	34
Section 17.1	Commodity Delivery Termination Events and Termination Payment Events..... 34
Section 17.2	Payments Following a Ledger Event 1
Section 17.3	Reserved..... 1
Section 17.4	Remedies and Termination 1
Section 17.5	Replacement of Swaps 2
Section 17.6	Present Assignment and Waiver of Right to Additional Termination Payments 4
Section 17.7	Limitation on Damages..... 5
Section 17.8	Option to Purchase Bonds..... 6
Section 17.9	Termination Payment Adjustment Schedule 6
Article XVIII. Receivables Purchases	6
Article XIX. Miscellaneous	6
Section 19.1	Indemnification Procedure..... 6
Section 19.2	Deliveries 7
Section 19.3	Entirety; Amendments 7
Section 19.4	Governing Law 8
Section 19.5	Non-Waiver..... 8
Section 19.6	Severability 8
Section 19.7	Exhibits 9
Section 19.8	Winding Up Arrangements 9
Section 19.9	Relationships of Parties..... 9
Section 19.10	Immunity..... 9
Section 19.11	Rates and Indices 9
Section 19.12	Limitation of Liability..... 12
Section 19.13	Counterparts..... 12
Section 19.14	Modification of and Compliance with Bond Indenture 12

TABLE OF CONTENTS
(continued)

	<u>Page</u>
Section 19.15	Rights of Trustee..... 12
Section 19.16	Waiver of Defenses..... 12
Section 19.17	Rate Changes 12
Section 19.18	U.S. Resolution Stay Provisions. 13
Exhibit A	- Delivery Points; Contract Quantities
Exhibit B	- Notices
Exhibit C	- Gas Remarketing
Exhibit D	- Termination Payment Schedule
Exhibit D-1	- Termination Payment Adjustment Schedule
Exhibit E	- Receivables Purchase Exhibit
Exhibit F	- Pricing and Other Terms
Exhibit G-1	- Gas Communications Protocol
Exhibit G-2	- Electricity Communications Protocol

AMENDED & RESTATED PREPAID COMMODITY SALES AGREEMENT

This Amended & Restated Prepaid Commodity Sales Agreement (hereinafter “Agreement”) is made and entered into as of [____], 2024 (the “Execution Date”), by and between Aron Energy Prepay 33 LLC, a Delaware limited liability company (“Seller”), and the Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Chapter 5 of Division 7 of Title 1 of the California Government Code, as amended) (“Buyer”). Each of Seller and Buyer is sometimes individually referred to herein as a “Party”, and collectively as the “Parties”.

WITNESSETH:

WHEREAS, J. Aron & Company LLC, a New York limited liability company (“J. Aron”), and Buyer previously entered into (i) that certain Prepaid Commodity Sales Agreement dated as of December 10, 2018 (the “Original Prepaid Agreement”), for the sale of natural gas and electricity by J. Aron to Buyer, and (ii) that certain Receivables Purchase Agreement, dated as of December 19, 2018 (the “Original Receivables Purchase Agreement”), and J. Aron has agreed to novate all of its right, title and interest under the Original Prepaid Agreement, the Original Receivables Purchase Agreement and the Re-Pricing Agreement (as defined below) to Seller pursuant to a Novation Agreement, dated as of the date hereof, by and among Seller, Buyer and J. Aron;

WHEREAS, in connection with the execution of this Agreement, Seller shall enter into that certain Commodity Purchase, Sale and Service Agreement, dated as of the date hereof (the “Commodity Sale and Service Agreement”), with J. Aron, pursuant to which (a) Seller shall acquire natural gas and electricity for sale under this Agreement and (b) J. Aron shall act as Seller’s agent under this Agreement and the other agreements entered into by Seller in connection with the Commodity Project (as defined below); and

WHEREAS, the Parties desire to amend and restate (i) the Original Prepaid Agreement in its entirety upon the terms and conditions set forth herein and (ii) the Original Receivables Purchase Agreement in its entirety upon the terms and conditions set forth in Exhibit E hereto.

NOW, THEREFORE, in consideration of the premises above and the mutual covenants and agreements herein set forth, the Parties agree as follows:

ARTICLE I. DEFINITIONS

Section 1.1 Defined Terms. The following terms, when used in this Agreement and identified by the capitalization of the first letter thereof, have the respective meanings set forth below, unless the context otherwise requires:

“Additional Termination Payment” means, with respect to a Commodity Delivery Termination Date that results from a Termination Payment Event where the Additional Termination Payment is designated in Exhibit F as applying, the net present value sum as of such

Commodity Delivery Termination Date of a stream of Monthly values for each Month that would have remained in the then-current Reset Period had such Commodity Delivery Termination Date not occurred, with each such Monthly value equal to (i) if during a Gas Delivery Period (A) the quantity of Gas (in MMBtu) that Seller would have been required to deliver during such Month, multiplied by (B) \$0.05/MMBtu and (ii) if during an Electricity Delivery Period (A) the quantity of Electricity (in MWh) that Seller would have been required to deliver during such Month, multiplied by (B) \$0.[58]/MWh for deliveries that would have been to the Primary Electricity Delivery Point. The net present value sum shall be calculated (x) assuming each such future Monthly value would have been realized on the last day of the Month, (y) using a 30/360 day basis, and (z) using the standard present value formula (present value = future value / (1 + i)^n) for each such Monthly value, where “i” is the SOFR Discount Rate for such Month plus the Discount Rate Spread (the sum expressed as an annual rate) and “n” is the number of years, including any fractional portion of a year, between such Month and the Commodity Delivery Termination Date. The “SOFR Discount Rate” for each Month is the fixed interest rate determined by Seller in a Commercially Reasonable manner and in accordance with standard market practices for such Month based on otherwise receiving/paying Simple Average SOFR with a designated maturity of one Month. “Simple Average SOFR” means the simple average of SOFRs for the applicable tenor, with the determination of this rate (which will be in arrears with a lookback) being established by Seller or its designee in accordance with (a) the conventions for this rate selected or recommended by the relevant Government Agency for determining Simple Average SOFR; and (b) to the extent that the Seller or its designee determines that Simple Average SOFR cannot be determined in accordance with clause (a) above, then the conventions for this rate that have been selected by the Seller or its designee giving due consideration to industry-accepted market practices for U.S. dollar denominated floating rate notes at such time. “SOFR” means a rate equal to the secured overnight financing rate, as administered by the Federal Reserve Bank of New York (or a successor administrator of the secured overnight financing rate).

“Administrative Fee” means the amount specified in Exhibit F.

“Affiliate” means, with respect to either Party, any entity which is a direct or indirect parent or subsidiary of such Party or which directly or indirectly (i) owns or controls such Party, (ii) is owned or controlled by such Party, or (iii) is under common ownership or control with such Party. For purposes of this definition, “control” of an entity means the power, directly or indirectly, either to (a) vote 50% or more of the securities having ordinary voting power for the election of directors or Persons performing similar functions or (b) direct or cause the direction of the management and policies, whether by contract or otherwise.

“Agreement” has the meaning specified in the preamble and shall include exhibits, recitals and attachments referenced herein and attached hereto and all amendments, supplements and modifications hereto and thereto.

“Alternate Electricity Delivery Point” has the meaning specified in Section 5.1(c).

“Alternate Gas Delivery Point” has the meaning specified in Section 5.1(a).

“APC Contract Price” has the meaning specified in the Commodity Supply Contract.

“Assigned Delivery Point” means, with respect to any Assigned Electricity, the Assigned Delivery Point as set forth in the applicable Assignment Schedule for such Assigned Electricity.

“Assigned Electricity” means any Electricity under a PPA Assignment Agreement to be delivered to J. Aron pursuant to the terms thereof.

“Assigned Gas” means any Gas under a Gas Assignment Agreement to be redelivered to J. Aron pursuant to the terms thereof.

“Assigned PAYGO Amount” means, for any Month during the Electricity Delivery Period, the amount, if any, by which the quantity of Assigned Electricity (in MWhs) under a PPA Assignment Agreement exceeds the Assigned Prepay Quantity thereunder for such Month.

“Assigned Prepay Quantity” has the meaning specified in Exhibit H to the Commodity Supply Contract.

“Assigned Product” means Assigned Electricity, Assigned RECs and any other Electricity Product included on an Assignment Schedule, subject to the limitations for such other Electricity Product set forth in Exhibit H of the Commodity Supply Contract during the Electricity Delivery Period.

“Assigned RECs” means any RECs to be delivered to Buyer pursuant to any Assigned Rights and Obligations.

“Assigned Rights and Obligations” has the meaning specified in the Commodity Supply Contract.

“Assignment Early Termination Date” has the meaning specified in the applicable PPA Assignment Agreement.

“Assignment Period” has the meaning specified in the Commodity Supply Contract.

“Assignment Schedule” has the meaning specified in the Commodity Supply Contract.

“Billing Date” has the meaning specified in Section 14.2(b).

“Billing Statement” has the meaning specified in Section 14.2(b).

“Bond Closing Date” means the first date on which the Bonds are issued pursuant to the Bond Indenture.

“Bond Indenture” means (i) the Amended & Restated Trust Indenture dated as of [____], 2024, between Buyer and the Trustee, as supplemented and amended from time to time in accordance with its terms, and (ii) any trust indenture entered into in connection with the commencement of any Interest Rate Period after the initial Interest Rate Period between Buyer

and the Trustee containing substantially the same terms as the indenture described in clause (i) and which is intended to replace the indenture described in clause (i) as of the commencement of such Interest Rate Period.

“Bonds” means the bonds issued pursuant to the Bond Indenture.

“Btu” means one (1) British thermal unit, the amount of heat required to raise the temperature of one (1) pound of water one (1) degree Fahrenheit at sixty (60) degrees Fahrenheit, and is the International Btu. The reporting basis for Btu is 14.73 psia and sixty (60) degrees Fahrenheit, *provided*, however, that the definition of Btu as determined by the operator of the relevant Delivery Point shall be deemed conclusive in accordance with Section 5.7.

“Business Day” means any day other than (i) a Saturday or Sunday, (ii) a Federal Reserve Bank Holiday, (iii) any other day on which commercial banks in either New York, New York or the State of California are authorized or required by Law to close, or (iv) any other day excluded pursuant to the Bond Indenture.

“Buyer” has the meaning specified in the preamble.

“Buyer Swap” means (i) the amended & restated transaction confirmation entered into as of the date hereof under the ISDA Master Agreement, dated as of December 10, 2018, between Buyer and the Swap Counterparty (which has been novated by RBC Europe Limited to Royal Bank of Canada as of the date of this Agreement), and (ii) each replacement Buyer Swap entered into pursuant to Section 17.5.

“Buyer Swap Custodial Agreement” means (i) that certain Amended & Restated Custodial Agreement, dated as of [____], by and among Buyer, the Trustee, the Custodian and the Swap Counterparty, as the same may be amended, modified or supplemented from time to time, and (ii) any replacement Buyer Swap Custodial Agreement entered into in connection with Buyer’s entry into a replacement Buyer Swap pursuant to Section 17.5.

“Buyer’s Statement” has the meaning specified in Section 14.1(a).

“CAISO” means California Independent System Operator or its successor.

“Claiming Party” has the meaning specified in Section 11.1.

“Claims” means all claims or actions, threatened or filed, that directly or indirectly relate to the indemnities provided herein, and the resulting losses, damages, expenses, attorneys’ fees, experts’ fees, and court costs, whether incurred by settlement or otherwise, and whether such claims or actions are threatened or filed prior to or after the termination of this Agreement.

“COB” has the meaning specified in Section 5.1(c).

“Commercially Reasonable” or “Commercially Reasonable Efforts” means, with respect to any purchase or sale or other action required to be made, attempted or taken by a Party under this Agreement, such efforts as a reasonably prudent Person would undertake for the protection of its own interest under the conditions affecting such purchase or sale or other action,

including without limitation, the amount of notice of the need to take such action, the duration and type of the purchase or sale or other action, the competitive environment in which such purchase or sale or other action occurs, and the risk to the Party required to take such action.

“Commodity” means Gas or Electricity and, to the extent included on an Assignment Schedule, Electricity Product related to the foregoing; provided that the inclusion of any Gas or Electricity on an Assignment Schedule is subject to the limitation set forth in Exhibit H of the Commodity Supply Contract, as applicable.

“Commodity Delivery Termination Date” means a date that occurs automatically pursuant to Section 17.1 or that is designated pursuant to Section 17.4(b) upon which the Delivery Period will end and Buyer’s and Seller’s respective obligations to receive and deliver Commodities under this Agreement will terminate.

“Commodity Delivery Termination Event” has the meaning specified in Section 17.1.

“Commodity Project” has the meaning specified in the Bond Indenture.

“Commodity Sale and Service Agreement” has the meaning specified in the recitals.

“Commodity Supply Contract” has the meaning specified in the Bond Indenture.

“Contract Quantity” means: (a) during the Gas Delivery Period for each Gas Day and each Delivery Point, the daily quantity of Gas (in MMBtu) shown on Exhibit A for such Delivery Point for the Month in which such Gas Day occurs, and (b) during the Electricity Delivery Period, (i) the Hourly Quantity, if any, for each Hour and each Delivery Point and (ii) the Assigned Prepay Quantity, if any, for each Month.

“CPT” means Central Daylight Saving Time when such time is applicable and otherwise means Central Standard Time.

“Critical Notice” has the meaning specified in Section 5.2(a)(ii).

“CSC Remarketing Election” means, with respect to the Commodity Supply Contract, that the Project Participant delivered a Remarketing Election Notice (as defined thereunder) for any Reset Period.

“Custodian” means Wells Fargo Bank, National Association, as custodian under each of the Swap Custodial Agreements.

“Daily Basis Differential” has the meaning specified in Section 19.11(a)(iii).

“Daily Commodity Reference Price” means (A) the Daily Index Price, (B) the Index Price (Low), (C) the Day-Ahead Market Price, or (D) the Real-Time Market Price.

“Daily Index Price” has the meaning specified on Exhibit A for each Gas Delivery Point.

“Daily Replacement Index” has the meaning specified in Section 19.11(a)(iii).

“Day-Ahead Market Price” has the meaning set forth on Exhibit A for each Electricity Delivery Point.

“Deemed Remarketing Notice” has the meaning specified in Exhibit C.

“Default Rate” means, as of any date of determination, the lesser of (a) the sum of (i) the rate of interest per annum quoted in The Wall Street Journal (Eastern Edition) under the “Money Rates” section as the “Prime Rate” for such date of determination, plus (ii) one percent per annum, or (b) if a maximum rate is imposed by applicable Law, such maximum lawful rate.

“Delivering Transporter” means the Transporter delivering Gas at a Delivery Point.

“Delivery Hours” has the meaning specified in Exhibit A.

“Delivery Period” has the meaning specified in Exhibit F.

“Delivery Point” means (a) during the Gas Delivery Period, the Gas Delivery Point and (b) during the Electricity Delivery Period, the Electricity Delivery Point.

“Discount Rate Spread” means the amount specified in Exhibit F.

“Early Termination Payment Date” means the last Business Day of the first Month that commences after a Termination Payment Event; provided that, in the case of a Termination Payment Event due to a Failed Remarketing, the Early Termination Payment Date shall be the last Business Day of the then-current Interest Rate Period.¹

“Electricity” means three-phase, 60-cycle alternating current electric energy, expressed in megawatt hours.

“Electricity Delivery Period” means the period commencing at 9:00 am CPT on the Switch Date and ending as of the last Hour (in LPT) on the last calendar day of the Delivery Period.

“Electricity Delivery Point” has the meaning specified in Section 5.1(c).

“Electricity Product” means Electricity and, to the extent included on an Assignment Schedule, RECs, capacity or other products related to the foregoing; *provided* that the inclusion of any Electricity Product on an Assignment Schedule is subject to the limitations set forth in Exhibit H of the Commodity Supply Contract.

“Execution Date” has the meaning specified in the preamble.

¹ SM NTD: We have defined Early Termination Payment Date, which is still relevant for this Agreement, and we have updated the instances of Early Termination Date to refer now to Commodity Delivery Termination Date.

“Failed Remarketing” has the meaning specified in the Bond Indenture.

“FERC” means the Federal Energy Regulatory Commission and any successor thereto.

“Firm” means, with respect to the obligations to deliver Gas during the Gas Delivery Period, that either Party may interrupt its performance without liability only to the extent that such performance is prevented for reasons of force majeure; *provided*, however, that during force majeure interruptions, the Party invoking force majeure may be responsible for Imbalance Charges as set forth in Section 5.5 related to its interruption after the nomination is made to the Transporter and until the change in deliveries and/or receipts is confirmed by the Transporter.

“Firm (LD)” means, with respect to the obligation to deliver Electricity, that either Party shall be relieved of its obligations to sell and deliver or purchase and receive without liability only to the extent that, and for the period during which, such performance is prevented by Force Majeure. In the absence of Force Majeure, the Party to which performance is owed shall be entitled to receive from the Party which failed to deliver/receive an amount determined pursuant to Article IV.

“Fixed Electricity Price” means the amount specified in Exhibit F.

“Fixed Gas Price” means the amount specified in Exhibit F.

“Force Majeure” has the following meanings during the Gas Delivery Period and the Electricity Delivery Period, respectively.

(a) During the Gas Delivery Period, “Force Majeure” means an event or circumstance which prevents one Party from performing its obligations under this Agreement, which event or circumstance was not anticipated as of the Execution Date, which is not within the reasonable control of, or the result of the negligence of, the Claiming Party, and which, by the exercise of due diligence, the Claiming Party is unable to overcome or avoid or cause to be avoided. Force Majeure shall include, but not be limited to, the following: (i) physical events such as acts of God, landslides, lightning, earthquakes, fires, storms or storm warnings, such as hurricanes, which result in evacuation of the affected area, floods, washouts, explosions, breakage or accident or necessity of repairs to machinery or equipment or lines of pipe; (ii) weather related events affecting an entire geographic region, such as low temperatures which cause freezing or failure of wells or lines of pipe; (iii) interruption and/or curtailment of transportation and/or storage by Transporters (*provided* that, if the affected Party is using interruptible or secondary Firm transportation, only if primary, in-path, Firm transportation is also curtailed by the same event, or if the relevant Transporter does not curtail based on path, if primary Firm transportation is also curtailed); (iv) acts of others such as strikes, lockouts or other industrial disturbances, riots, sabotage, insurrections, wars or acts of terror; (v) governmental actions such as necessity for compliance with any Law promulgated by a Government Agency having jurisdiction; (vi) an inability by Seller to deliver Gas due to the circumstances described as an event of Force Majeure in Section 5.7; (vii) an event affecting a supplier delivering Gas to Seller (or to Buyer or a Project Participant on behalf of Seller) to the extent (A) such Gas was intended for delivery or redelivery to Buyer or a Project Participant under this Agreement, and (B) such event would be considered

Force Majeure under this Agreement if it affected Seller directly; (viii) any invocation of “Force Majeure” by a supplier to J. Aron of Gas to be delivered under the Commodity Sale and Service Agreement (regardless of whether the event for which such Force Majeure was invoked by J. Aron or Seller or would otherwise be considered an event of Force Majeure under this Agreement if it affected Seller directly)²; and (ix) any invocation of Force Majeure by the Project Participant under the Commodity Supply Contract. Notwithstanding the foregoing, neither Party shall be entitled to the benefit of the provisions of Force Majeure to the extent performance is affected by any or all of the following circumstances: (i) the curtailment of interruptible or secondary Firm transportation unless primary, in-path, Firm transportation is also curtailed; (ii) the Party claiming excuse failed to remedy the condition and to resume the performance of such covenants or obligations with reasonable dispatch; (iii) economic hardship, to include, without limitation, Seller’s ability to sell Gas at a higher or more advantageous price, Buyer’s ability to purchase Gas at a lower or more advantageous price, or a Government Agency disallowing, in whole or in part, the pass through of costs resulting from this Agreement; (iv) the loss of Buyer’s market(s) or Buyer’s inability to use or resell Gas purchased under this Agreement, except, in either case, as provided in the foregoing definition of Force Majeure; or (v) the loss or failure of Seller’s Gas supply or depletion of reserves, except, in either case, as provided in the foregoing definition of Force Majeure. Buyer shall not be entitled to the benefit of the provisions of Force Majeure to the extent performance is affected by any action taken by Buyer in its governmental capacity. The Party claiming Force Majeure shall not be excused from its responsibility for Imbalance Charges. In addition to the foregoing and notwithstanding anything to the contrary herein, to the extent that a Gas Assignment Agreement is terminated early, such termination shall constitute Force Majeure with respect to Seller hereunder until the end of the first Month following the Month in which such early termination occurs.

(b) During the Electricity Delivery Period, “Force Majeure” means an event or circumstance which prevents one Party from performing its obligations under this Agreement, which event or circumstance was not anticipated as of the Execution Date, which is not within the reasonable control of, or the result of the negligence of, the Claiming Party, and which, by the exercise of due diligence, the Claiming Party is unable to overcome or avoid or cause to be avoided. Force Majeure shall not be based on (i) the loss of Buyer’s markets; (ii) Buyer’s inability economically to use or resell any Commodities purchased hereunder; (iii) the loss or failure of Seller’s supply except if such loss or failure results from curtailment by a Transmission Provider; or (iv) Seller’s ability to sell the Commodities at a higher price. Neither Party may raise a claim of Force Majeure based in whole or in part on curtailment by a Transmission Provider unless (i) such Party has contracted for firm transmission with such Transmission Provider for the Commodities to be delivered to or received at the Delivery Point and (ii) such curtailment is due to “force majeure” or “uncontrollable force” or a similar term as defined under the Transmission Provider’s tariff; *provided*, however, that existence of the foregoing factors shall not be sufficient to conclusively or presumptively prove the existence of Force Majeure absent a showing of other facts and circumstances which in the aggregate with such factors establish that Force Majeure as defined in the first sentence hereof has occurred. In addition to the foregoing and notwithstanding anything to the contrary herein, to the extent that a PPA Assignment Agreement is terminated

² SM NTD: J. Aron requires the ability to pass through upstream FM given developments in the gas market in recent years.

early, such termination shall constitute Force Majeure with respect to Seller hereunder until the end of the first Month following the Month in which such early termination occurs.

“Funding Agreement” means initially that certain Non-Participating Funding Agreement, dated as of the date hereof, by and between Seller and the Funding Recipient, and any replacement funding agreement entered into for a subsequent Reset Period.

“Funding Recipient” means initially Pacific Life Insurance Company, a stock life insurance company organized under the laws of the State of Nebraska, or its successors to or permitted assignees of the Funding Agreement, and any other Person that becomes counterparty to Seller under a Funding Agreement for a subsequent Reset Period.

“Gas” shall mean any mixture of hydrocarbons and noncombustible gases in a gaseous state consisting primarily of methane.

“Gas Assignment Agreement” means an assignment agreement entered into consistent with [Section 8 of Exhibit G-1].

“Gas Day” means a period of twenty-four (24) consecutive hours, beginning at 9:00 a.m. CPT and ending at 8:59 a.m. CPT.

“Gas Delivery Period” means the period commencing at 9:00 am CPT on the first day of the Delivery Period and ending at 8:59:59 am CPT on the earlier of (i) the Switch Date, and (ii) the last Gas Day that commences during the Delivery Period.

“Gas Delivery Point” has the meaning specified in Section 5.1(a).

“Government Agency” means the United States of America, any state thereof, any municipality, or any local jurisdiction, or any political subdivision of any of the foregoing, including, but not limited to, courts, administrative bodies, departments, commissions, boards, bureaus, agencies, or instrumentalities.

“Governmental Approval” means any authorization, consent, approval, license, ruling, permit, exemption, variance, order, judgment, decree, declaration of or regulation by any Government Agency relating to the execution, delivery or performance of this Agreement as any of the foregoing are in effect as of the Execution Date.

“Hour” means each 60-minute period commencing at 9:00 am CPT on the Switch Date through the last hour of the Delivery Period. The term “Hourly” shall be construed accordingly.

“Hourly Quantity” means, (i) with respect to each Delivery Hour, the quantity (in MWh) set forth on Exhibit A for the Month in which such Delivery Hour occurs, and (ii) with respect to any other Hour, zero (0) MWh.

“Imbalance Charges” means any fees, penalties, costs or charges (in cash or in kind) assessed by a Transporter for failure to satisfy the Transporter’s balancing and/or nomination requirements based on such Transporter’s applicable pipeline tariff.

“Indemnifying Party” has the meaning specified in Section 5.3(b).

“Index Price (Low)” has the meaning set forth on Exhibit A for each Gas Delivery Point.

“Interest Rate Period” has the meaning specified in the Bond Indenture.

“ISTs” has the meaning specified in Section 5.1(c).

“J. Aron Acceleration Option” means the exercise by J. Aron of its right under the Commodity Sale and Service Agreement to pay the Termination Payment to Seller following the occurrence of a Ledger Event, which shall be subject to Seller’s prior consent thereto as provided in the Commodity Sale and Service Agreement.

“Law” means any statute, law, rule or regulation or any judicial or administrative interpretation thereof having the effect of the foregoing enacted, promulgated, or issued by a Government Agency whether in effect as of the Execution Date or at any time in the future.

“LPT” means the local prevailing time then in effect in the State of California.

“Mandatory Purchase Date” has the meaning specified in the Bond Indenture.

“Minimum Discount Percentage” has the meaning specified in the Commodity Supply Contract.

“MMBtu” means one million British thermal units, which is equivalent to one dekatherm.

“Month” means (a) during the Gas Delivery Period, the period beginning at 9:00 a.m. CPT on the first day of a calendar month and ending at 8:59:59 a.m. CPT on the first day of the next calendar month, and (b) during the Electricity Delivery Period, a calendar month. The term “Monthly” shall be construed accordingly.

“Monthly Basis Differential” has the meaning specified in Section 19.11(b)(ii).

“Monthly Index Price” has the meaning set forth on Exhibit A for each Gas Delivery Point and which, for the avoidance of doubt, shall be defined as the applicable monthly index price plus any Delivery Point Premium in effect under and as defined in the Commodity Supply Contract.

“Monthly Replacement Index” has the meaning specified in Section 19.11(b)(ii).

“MWh” means megawatt-hour.

“NERC Holidays” means New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, and any other day declared a holiday by the North American Electric Reliability Corporation.

“Optional Commodity Delivery Termination Event” has the meaning specified in Section 17.1.

“Party” has the meaning specified in the preamble.

“PPA Assignment Agreement” means, for any Assigned Rights and Obligations, an agreement between the Project Participant, J. Aron and an APC Party in the form attached as Attachment 2 to Exhibit H to the Commodity Supply Contract (with such changes as may be mutually agreed upon by Buyer, the Project Participant, J. Aron and the APC Party, each in its sole discretion).

“Prepayment” means the amount specified in Exhibit F.

“Prepayment Outside Date” means the date specified in Exhibit F.

“Primary Electricity Delivery Point” has the meaning specified in Section 5.1(c).

“Primary Gas Delivery Point” has the meaning specified in Section 5.1(a).

“Project Participant” has the meaning specified in the Bond Indenture.

“Re-Pricing Agreement” means the Amended & Restated Re-Pricing Agreement, dated as of the Bond Closing Date, by and between Buyer and Seller.

“Real-Time Market Price” has the meaning set forth on Exhibit A for each Electricity Delivery Point.

“Receiving Transporter” means the Transporter taking Gas at a Delivery Point, or absent such Transporter, the Transporter delivering Gas at such Delivery Point.

“RECs” means “renewable energy credits,” a certificate of proof associated with the generation of electricity from an eligible renewable energy resource, which certificate is issued through the accounting system established by the California Energy Commission pursuant to the California Renewable Energy Resources Act, including the California Renewables Portfolio Standard Program, Article 16 of Chapter 2.3, as implemented and amended from time to time, and any successor law, evidencing that one (1) MWh of energy was generated and delivered from such eligible renewable energy resource. Such certificate is a tradable environmental commodity (also known as a “green tag”) for which the owner of the REC can prove that it has purchased renewable energy.

“Reduced Hourly Quantity” has the meaning specified in the Commodity Supply Contract.

“Remarketing Non-Default Termination Event” has the meaning specified in Exhibit C.

“Remarketing Notice” has the meaning specified in Exhibit C.

“Replacement Electricity” means Electricity purchased by Buyer or a Project Participant to replace any Shortfall Quantity *provided* that such Electricity is purchased for delivery in the Delivery Hour to which such Shortfall Quantity relates.

“Replacement Electricity Price” means, with respect to any Shortfall Quantity for Electricity, the price (in \$/MWh) at which Buyer or a Project Participant, acting in a Commercially Reasonable manner, purchases Replacement Electricity in respect of such Shortfall Quantity, including (i) costs reasonably incurred by Buyer or a Project Participant in purchasing such substitute Electricity, and (ii) additional transmission charges, if any, reasonably incurred by Buyer or a Project Participant to the Delivery Point. The Replacement Electricity Price for any Shortfall Quantity shall not include any administrative or other internal costs incurred by Buyer or a Project Participant and shall be limited to a price that is Commercially Reasonable with respect to the timing and manner of purchase given (i) the amount of notice provided by the Seller, (ii) the immediacy of Buyer’s or the Project Participant’s Electricity needs or redelivery obligations, (iii) the quantities involved, (iv) the anticipated length of failure by Seller, (v) Buyer’s or the Project Participant’s obligation to mitigate Seller’s damages pursuant to Section 4.1(f) and any (vi) other relevant factors. In no event shall the Replacement Electricity Price include any penalties, ratcheted demand or similar charges, nor shall Buyer or a Project Participant be required to utilize or change its utilization of its owned or controlled assets or market positions to minimize Seller’s liability.

“Replacement Gas” means Gas purchased by Buyer or a Project Participant to replace any Shortfall Quantity *provided* that such Gas (i) is purchased for delivery on the Gas Day to which such Shortfall Quantity relates, (ii) is purchased for delivery in the Month such Shortfall Quantity arises, or (iii) relates to a Shortfall Quantity that arose on a Gas Day that commences on any of the last seven Business Days of a Month, and is purchased for delivery in the Month following the Month in which such Shortfall Quantity arose.

“Replacement Gas Price” means, with respect to any Shortfall Quantity for Gas, the price (in \$/MMBtu) at which Buyer or a Project Participant, acting in a Commercially Reasonable manner, purchases Replacement Gas for delivery at the Delivery Point, subject to the final sentence of this definition, in respect of such Shortfall Quantity, including (i) costs reasonably incurred by Buyer or a Project Participant in purchasing such substitute Gas (including, but not limited to, any fees, charges, penalties or other costs payable by Buyer or a Project Participant as a result of purchasing such substitute Gas that must be delivered to Buyer or such Project Participant), and (ii) any transportation costs (including storage withdrawal and injection costs, which may include liquefaction and vaporization costs for stored liquefied natural gas). The Replacement Gas Price for any Shortfall Quantity shall not include any administrative or other internal costs incurred by Buyer or a Project Participant and shall be limited to a price that is Commercially Reasonable with respect to the timing and manner of purchase given (i) what constitutes a price reasonable for the delivery area, (ii) the amount of notice provided by Seller, (iii) the immediacy of Buyer’s Gas consumption needs, as applicable, (iv) the quantities involved, (v) the anticipated length of failure by Seller and (vi) Buyer’s obligation to mitigate Seller’s damages pursuant to Section 4.1(f) and the Project Participant’s corresponding obligation in the Commodity Supply Contract. In no event shall the Replacement Gas Price include any penalties or similar charges, *provided* that Imbalance Charges may be recovered under Section 5.5. If Buyer or Project Participant, as applicable, is unable to purchase Replacement Gas at the Delivery Point

through the exercise of Commercially Reasonable Efforts, then Replacement Gas may be purchased at PG&E Citygate in accordance with the foregoing; provided that that the Replacement Gas Price shall be reduced by any costs that Buyer or Project Participant avoids by receiving Gas at PG&E Citygate rather than the Delivery Point.

“Reset Period” means each “Reset Period” under the Re-Pricing Agreement.

“Schedule”, “Scheduled” or “Scheduling” means the actions of Seller, Buyer and/or their designated representatives, including each Party’s Transmission Providers, if applicable, of notifying, requesting and confirming to each other the quantity of Commodity to be delivered during any given portion of the Delivery Period at a specified Delivery Point.

“Secondary Electricity Delivery Point” has the meaning specified in Section 5.1(c).

“Seller” has the meaning specified in the preamble.

“Seller Swap” means (i) the amended & restated transaction confirmation, dated as of the date hereof, entered into under the ISDA Master Agreement, dated as of December 10, 2018, between Seller and the Swap Counterparty (which ISDA Master Agreement has been novated by J. Aron to Seller as of the date of this Agreement), and (ii) each replacement Seller Swap entered into pursuant to Section 17.5.

“Seller Swap Custodial Agreement” means (i) that certain Amended & Restated Custodial Agreement, dated as of [____], by and among Seller, the Trustee, the Custodian and the Swap Counterparty, as the same may be amended, modified or supplemented from time to time, and (ii) each replacement Seller Swap entered into pursuant to Section 17.5.

“Shortfall Quantity” has the meaning specified in Section 4.1.

“SPE Master Custodial Agreement” means that certain SPE Master Custodial Agreement, dated as of the Bond Closing Date, by and among the Seller, J. Aron, Buyer, the Trustee, and the SPE Master Custodian, as the same may be amended, modified or supplemented from time to time.

“SPE Master Custodian” means initially The Bank of New York Mellon, as custodian under the SPE Master Custodial Agreement.

“Specified Fixed Price” means the amount specified in Exhibit F.

“Specified Investment Agreement” means a guaranteed investment contract between the Trustee and a provider concerning the investment of funds in the Working Capital Account, the Debt Service Reserve Account and/or the Debt Service Account (each as defined in the Bond Indenture).

“Structural Remarketing Notice” has the meaning specified in Article VII.

“Swap Counterparty” means (i) Royal Bank of Canada, a bank organized under the Laws of Canada, and (ii) any other Person that becomes counterparty to Buyer under a Buyer Swap or to Seller under a Seller Swap, in each case pursuant to Section 17.5.

“Swap Custodial Agreements” means the Buyer Swap Custodial Agreement and the Seller Swap Custodial Agreement.

“Swap Replacement Period” has the meaning specified in Section 17.5(a).

“Switch Date” means such date as determined pursuant to the procedure described in Section 3.3 below.

“Terminating Party” means any Party that has the right to terminate this Agreement pursuant to Article XVII.

“Termination Payment” means, with respect to any Early Termination Payment Date, the amount specified on Exhibit D-1 for the calendar month in which such Early Termination Payment Date occurs (as adjusted by any applicable Termination Payment Adjustment Amount) without any set-off or netting of amounts then due from Buyer.

“Termination Payment Adjustment Amount” means, with respect to any Early Termination Payment Date, the amount specified on Exhibit D-2 for the calendar month in which such Early Termination Payment Date occurs. For the avoidance of doubt, the Termination Payment Adjustment Amount for the period commencing on the Execution Date is zero.

“Termination Payment Adjustment Schedule” means the schedule of Termination Payment Adjustment Amounts set forth in Exhibit D-2, as such exhibit may be populated and amended from time to time in accordance with Section 17.9.

“Termination Payment Event” means (i) a Commodity Delivery Termination Event that is specified as a Termination Payment Event in Section 17.1**Error! Reference source not found.** or (ii) a J. Aron Acceleration Option.

“Transaction Documents” has the meaning specified in Article XIII.

“Transmission Provider(s)” means any entity or entities transmitting or transporting Electricity on behalf of Seller or Buyer to or from the Delivery Point.

“Transporter(s)” means all Gas gathering or pipeline companies, or local distribution companies acting in the capacity of a transporter, transporting Gas for Seller or Buyer upstream or downstream, respectively, of the Delivery Point.

“Trustee” means [Computershare], and its successors as Trustee under the Bond Indenture.

“Upstream Supply Contract” has the meaning specified in Exhibit G-1.

Section 1.2 Definitions; Interpretation. References to “Articles,” “Sections,” “Schedules” and “Exhibits” shall be to Articles, Sections, Schedules and Exhibits, as the case may be, of this Agreement unless otherwise specifically provided. Section headings in this Agreement are included herein for convenience of reference only and shall not constitute a part of this Agreement for any other purpose or be given any substantive effect. Any of the terms defined herein may, unless the context otherwise requires, be used in the singular or the plural, depending on the reference. The use herein of the word “include” or “including”, when following any general statement, term or matter, shall not be construed to limit such statement, term or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not nonlimiting language (such as “without limitation” or “but not limited to” or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that fall within the broadest possible scope of such general statement, term or matter. Any reference herein to any agreement or document includes all amendments, supplements or restatements to and of such agreement or document as may occur from time to time.

ARTICLE II. EXECUTION DATE AND DELIVERY PERIOD

Section 2.1 Execution Date; Delivery Period. This Agreement shall become effective upon the Bond Closing Date, and, unless this Agreement is terminated early pursuant to Section 2.2, all of Seller’s and Buyer’s obligations under this Agreement shall be deemed to have been incurred upon the Bond Closing Date. Unless this Agreement is terminated pursuant to Section 2.2, then, upon receipt of the Prepayment³, the delivery of Commodities under this Agreement shall commence and continue for the Delivery Period.

Section 2.2 Termination by Seller Prior to Prepayment. Seller shall have no obligation to perform under this Agreement unless and until it has received the Prepayment from Buyer pursuant to Section 3.1(a)2. In the event Seller has not received the Prepayment prior to 1:00 p.m. local time in New York, New York on the Prepayment Outside Date, Seller shall have the right, until such Prepayment has been paid, to terminate this Agreement without any further obligation or liability of either Party; *provided* that, for the avoidance of doubt, in the event Seller so terminates, such termination shall be effective regardless of whether Buyer tenders the Prepayment after such deadline. For the avoidance of doubt, no Termination Payment or Additional Termination Payment shall be payable by Seller under any circumstances if this Agreement terminates pursuant to this Section 2.2.

Section 2.3 J. Aron as Agent.

(a) Pursuant to the terms of the Commodity Sale and Service Agreement, Seller has irrevocably appointed J. Aron as its agent to issue notices and, as set forth therein, to take any other actions that Seller is required or permitted to take under this Agreement and the other agreements entered into by Seller in connection with the Commodity Project so long as the Commodity Sale and Service Agreement remains in effect. Buyer may rely on notices or other

³ OHS NTD: To discuss how the prepayment amount already paid in connection with the 2018 transaction should be referenced. Will the relevant amount be taken into account in determining the Prepayment Amount on Exhibit F? SM NTD: This will be the prepayment amount for the new bond issuance; no references to the original prepayment amount are needed in this Agreement.

actions taken by J. Aron on Seller's behalf; provided that, if (a) the Commodity Sale and Service Agreement is terminated and (b) Seller delivers to Buyer notice (i) of such termination and (ii) that it has removed J. Aron as its agent, Buyer may no longer rely on notices or other actions taken by J. Aron from and after the date such notice is given.

(b) Seller shall indemnify Buyer against, and release and hold Buyer harmless from, any and all losses, claims, damages, liabilities and related expenses (including the reasonable and documented fees, charges and disbursements of any counsel for Buyer) incurred by any Buyer or asserted against Buyer by any Person (including Seller or J. Aron) arising out of, in connection with, or as a result of Buyer's reliance on any action by or communication from J. Aron, at any time prior to delivery of notice of termination of pursuant to Section 2.3(a), that purports to be taken of given in J. Aron's capacity as the agent of Seller.

ARTICLE III. SALE AND PURCHASE

Section 3.1 Sale and Purchase of Commodities.

(a) On each Gas Day during the Gas Delivery Period, Seller agrees to sell and deliver or cause to be delivered to Buyer, and Buyer agrees to take or cause to be taken from Seller, in each case, on a Firm basis, the Contract Quantity of Gas pursuant to the terms and conditions set forth in this Agreement, including the limitations set forth herein relating to any portion of the Contract Quantity of Gas for which a Gas Assignment Agreement is in effect.

(b) During each Hour during the Electricity Delivery Period, Seller agrees to sell and deliver or cause to be delivered to Buyer, and Buyer agrees to take or cause to be taken from Seller, in each case, on a Firm (LD) basis, the Hourly Quantity of Electricity, if any, pursuant to the terms and conditions set forth in this Agreement. Additionally, during each Month of the Electricity Delivery Period, Seller agrees to sell and deliver or cause to be delivered to Buyer, and Buyer agrees to purchase and take or cause to be taken from Seller the Assigned Prepay Quantity, if any, of Electricity subject to the terms and conditions of this Agreement including the limitations set forth herein relating to any portion of the Contract Quantity of Electricity for which a PPA Assignment Agreement is in effect.

Section 3.2 Prepayment. Prior to the commencement of the Delivery Period, Buyer shall pay Seller for all Commodities to be delivered during the Delivery Period in an amount equal to the Prepayment, and Seller shall accept the Prepayment as payment in full for all Commodities to be delivered hereunder. Buyer shall pay the Prepayment in a single lump sum payment by wire transfer of immediately available funds to an account designated by Seller. In no event shall Buyer be entitled to any rebate or refund of the Prepayment, but nothing in this Section 3.2 shall limit Buyer's rights under (i) Article IV for Seller's failure to deliver Commodities (whether or not excused), (ii) Section 5.5 for Imbalance Charges incurred as a result of Seller's delivery of quantities of Gas greater than or less than the Contract Quantities at any Delivery Point, (iii) Article XVII upon early termination of this Agreement or (iv) Exhibit C with respect to remarketing of Commodities in accordance therewith. In no event shall Buyer be required to pay the Prepayment unless and until the Bonds are issued in exchange for a purchase price sufficient to pay costs of issuance, to fund required reserves under the Bond Indenture (or

purchase surety bonds or enter into any similar arrangements in lieu of funding such reserves), and to pay the Prepayment.

Section 3.3 Switch Date to Commence Electricity Deliveries. On the Switch Date, deliveries of Gas hereunder will cease, and deliveries of Electricity will commence. Buyer may designate the Switch Date or modify a previously designated Switch Date to a later date by delivering written notice to Seller, *provided* that (i) the Switch Date may occur no earlier than July 1, 2028, (ii) the Switch Date must begin on the first day of a Month that commences not earlier than (A) six (6) Months after such notice is delivered if deliveries will be to the Primary Electricity Delivery Point or (B) twelve (12) Months after such notice is delivered if deliveries will be to a Secondary Electricity Delivery Point, Alternate Electricity Delivery Point or Assigned Delivery Point, (iii) any notice modifying a previously designated Switch Date must be delivered no later than twelve Months prior to the date the Switch Date otherwise would have occurred, and (iv) the Switch Date may be modified to an earlier date only once but may be modified to a later date from time to time subject to the other requirements set forth herein.

Section 3.4 Sale and Purchase of Commodities. With respect to any Assigned PAYGO Amount delivered hereunder, Buyer shall pay Seller an amount equal to the quantity of such Assigned PAYGO Product multiplied by the applicable contract price(s) then in effect with respect to Energy under the applicable Assigned PPA(s).⁴

ARTICLE IV. FAILURE TO DELIVER OR TAKE COMMODITIES

Section 4.1 Seller's Failure to Deliver the Contract Quantity (Not Due to Force Majeure).

(a) Except to the extent Buyer is excused under Section 4.3, if, on any Gas Day during the Gas Delivery Period or for any Delivery Hour during the Electricity Delivery Period, Seller breaches its obligation to deliver all or any portion of the Contract Quantity at any Delivery Point pursuant to the terms of this Agreement, then the portion of the Contract Quantity that Seller failed to deliver shall be a "Shortfall Quantity" and Buyer shall exercise Commercially Reasonable Efforts to purchase Replacement Gas (during the Gas Delivery Period) or Replacement Electricity (during the Electricity Delivery Period); *provided*, however, if the Daily Index Price for such Gas Day at such Delivery Point is less than the Monthly Index Price applicable to such Gas Day at such Delivery Point, then (i) Buyer shall not be required to exercise such Commercially Reasonable Efforts, (ii) Buyer and the Project Participant will be deemed, for purposes of this Agreement, not to have purchased Replacement Gas for such Shortfall Quantity, (iii) Section 4.1(c) shall apply exclusively with respect to such Shortfall Quantity, and (iv) Section 4.1(b) and Section 4.1(d) shall not apply to such Shortfall Quantity.

(b) To the extent Buyer or the Project Participant actually purchases Replacement Gas (during the Gas Delivery Period) before the end of the Month in which such Shortfall Quantity arises or purchases Replacement Electricity (during the Electricity Delivery

⁴ NTD: Parties to discuss alternative of establishing a separate Custodial Agreement that manages all Assigned PPA settlements.

Period) with respect to any Shortfall Quantity, then Seller shall pay to Buyer the result determined by the following formula:

$$P = Q \times (HP + AF)$$

Where:

P = The amount payable by Seller under this Section 4.1(b);

Q = The quantity of Replacement Gas or Replacement Electricity purchased;

HP = The higher of (i) the Replacement Gas Price or Replacement Electricity Price, as applicable or (ii) (A) during the Gas Delivery Period, the Monthly Index Price applicable to the Gas Day and the Delivery Point for which the Shortfall Quantity arose, or (B) during the Electricity Delivery Period, the Day-Ahead Market Price applicable to the Delivery Hour and the Delivery Point for which the Shortfall Quantity arose; *provided* that in the case of a Shortfall Quantity arising at a Secondary Electricity Delivery Point, “HP” shall be deemed to equal the Day-Ahead Market Price; and

AF = The Administrative Fee.

(c) If, with respect to any Shortfall Quantity, Replacement Gas or Replacement Electricity (as applicable) is not purchased, then Seller shall pay to Buyer the result determined by the following formula:

$$P = Q \times IP$$

Where:

P = The amount payable by Seller under this Section 4.1(c);

Q = The portion of the Shortfall Quantity described in the lead-in to this Section 4.1(c); and

IP = Either (i) during the Gas Delivery Period, the Monthly Index Price applicable to the Gas Day and the Delivery Point for which the Shortfall Quantity arose, or (ii) during the Electricity Delivery Period, the Day-Ahead Market Price applicable to the Delivery Hour and the Delivery Point for which the Shortfall Quantity arose.

(d) If, with respect to any Shortfall Quantity for Gas that arises on a Gas Day that commences on any of the last seven Business Days of a Month, Buyer or the Project Participant purchases Replacement Gas for delivery in the Month following the Month in which such Shortfall Quantity arose, then Seller shall pay to Buyer, in addition to those amounts already paid under Section 4.1(c), the positive result, if any, determined by the following formula:

$$P = Q \times ((RP + AF) - IP)$$

Where:

P = The amount payable by Seller under this Section 4.1(d);

Q = The portion of the Shortfall Quantity described in the lead-in to this Section 4.1(d) above;

RP = The Replacement Gas Price;

AF = The Administrative Fee; and

IP = The Monthly Index Price applicable to the Gas Day and Delivery Point for which the Shortfall Quantity arose.

(e) Buyer shall exercise Commercially Reasonable Efforts to monitor or cause Project Participant to monitor nominations and deliveries of Gas to be delivered directly from Seller to Buyer at each Delivery Point for each Gas Day and promptly notify Seller upon becoming aware that such nominations or deliveries might result in a Shortfall Quantity with respect to such Delivery Point. Buyer shall also exercise Commercially Reasonable Efforts to monitor or cause Project Participant to monitor any nominations and deliveries of Gas to be delivered directly from Seller to Project Participant at each Delivery Point for each Gas Day and promptly notify or cause Project Participant to promptly notify Seller if Buyer or Project Participant becomes aware that such nomination or deliveries would reasonably be expected to result in a Shortfall Quantity with respect to such Delivery Point.

(f) Buyer shall cause Project Participant to comply with its obligations under Section 4.1(d) of the Commodity Supply Contract to mitigate damages.

(g) Imbalance Charges shall not be recovered under this Section 4.1, but rather in accordance with Section 5.5.

Section 4.2 Buyer's Failure to Take the Contract Quantity (Not Due to Force Majeure). Except to the extent Buyer is excused under Section 4.3, if, on any Gas Day during the Gas Delivery Period or for any Delivery Hour during the Electricity Delivery Period, Buyer breaches its obligation to take all or any portion of the Contract Quantity at any Delivery Point pursuant to the terms of this Agreement, then Buyer shall be deemed to have issued a Deemed Remarketing Notice with respect to the portion not taken. Imbalance Charges shall not be recovered under this Section 4.2, but rather in accordance with Section 5.5. For the avoidance of doubt, with respect to Gas required to be delivered on any Gas Day, Buyer may be deemed to have issued a Deemed Remarketing Notice with respect to the entire Contract Quantity unless Seller receives actual written notice from Buyer to the contrary prior to the end of the following Month or thirty (30) calendar days after Buyer first receives notice of a deficiency from the applicable Transporter, whichever is later.

Section 4.3 Failure to Deliver or Take Due to Force Majeure. If during any Month during the Gas Delivery Period or for any Delivery Hour during the Electricity Delivery Period:

(a) Buyer fails to take or Seller fails to deliver all or any portion of the Monthly Contract Quantity of Gas (during the Gas Delivery Period) or the Contract Quantity of Electricity (during the Electricity Delivery Period) at any Delivery Point pursuant to the terms of this Agreement; and

(b) such failure is due to Force Majeure claimed by either Party,

then Seller shall pay to Buyer the result determined by the following formula with respect to each such Delivery Point:

$$P = Q \times IP$$

Where:

P = The amount payable by Seller under this Section 4.3;

Q = The quantity of Gas or Electricity described in the lead-in to this Section 4.3; and

IP = Either (i) during the Gas Delivery Period, the Monthly Index Price applicable to such Month and Delivery Point, or (ii) during the Electricity Delivery Period, the Day-Ahead Market Price applicable to such Delivery Hour and Delivery Point.

Section 4.4 Make-Up Gas Deliveries in Lieu of Payment. The Parties may mutually agree, in lieu of payment pursuant to Section 4.1, Section 4.2 or Section 4.3, to make up all or any portion of the Contract Quantity of Gas not delivered or taken by increasing deliveries and takes over the remainder of the Month in which such failure occurred or in the following Month. If a Shortfall Quantity is made up in lieu of payment in accordance with the preceding sentence, Seller may apply such made up quantity against any balance of Shortfall Quantities, including against the most recent Shortfall Quantities.

Section 4.5 Sole Remedies. Except with respect to (a) the payment of Imbalance Charges pursuant to Section 5.5, (b) termination of this Agreement pursuant to Section 17.4, and (c) the obligations of Seller under Section 8(c) of Exhibit C, the remedies set forth in this Article IV shall be each Party's sole and exclusive remedies for any failure by the other Party to deliver or take Commodities, as applicable, pursuant to this Agreement.

Section 4.6 Limitations. Notwithstanding anything herein to the contrary, neither Party shall have any liability or other obligation to the other under this Article IV with respect to a failure to take or deliver any portion of the Contract Quantity for which a Gas Assignment Agreement or a PPA Assignment Agreement is in effect.

ARTICLE V.
TRANSPORTATION AND DELIVERY; COMMUNICATIONS

Section 5.1 Delivery Point.

(a) All Gas delivered under this Agreement shall be delivered and received (i) at the delivery point specified in Exhibit A (the “Primary Gas Delivery Point”), or (ii) to any other point (an “Alternate Gas Delivery Point”) that has been mutually agreed by Seller and Buyer (the Primary Gas Delivery Point or Alternate Gas Delivery Point, if specified, each being a “Gas Delivery Point”).

(b) The Daily Index Price, Index Price (Low) and Monthly Index Price for each Alternate Gas Delivery Point, as applicable, shall be the price mutually agreed and identified by the Parties, or if no such price is identified for such Alternate Gas Delivery Point, the price shall be the Daily Index Price, Index Price (Low) or Monthly Index Price for such Alternate Gas Delivery Point, as applicable, specified on Exhibit A for the Primary Gas Delivery Point from which quantities are being shifted to such Alternate Gas Delivery Point. The Parties shall (i) update Exhibit A upon any change to the terms thereof, including particularly as a result of any update to the Monthly Index Price to reflect a change in the Delivery Point Premium as defined in and established pursuant to the terms of the Commodity Supply Contract, and (ii) deliver a copy of such updated Exhibit A to the Swap Counterparty consistent with the terms of the Buyer Swap and the Seller Swap.

(c) All Electricity delivered under this Agreement shall be Scheduled (i) at the delivery point set forth in Exhibit A (the “Primary Electricity Delivery Point”), (ii) at one of the secondary delivery points set forth in Exhibit A with six (6) Months’ prior notice from Buyer (the “Secondary Electricity Delivery Points”), (iii) to any other point (an “Alternate Electricity Delivery Point”) that has been mutually agreed by Buyer and Seller or selected by Buyer pursuant to the following sentence or (iv) any applicable Assigned Delivery Point specified in an Assignment Schedule with respect to Assigned Electricity (the Primary Electricity Delivery Point, Secondary Electricity Delivery Point, Alternate Electricity Delivery Point or Assigned Delivery Point, if specified, each being an “Electricity Delivery Point”). Upon twelve (12) Months’ prior written notice to Seller, Buyer may select the California-Oregon Border (“COB”) as an Alternate Electricity Delivery Point *provided* that (A) Seller, within six (6) months after receiving such notice, confirms that it is able to obtain reliable Electricity supply for the Contract Quantity to be delivered hereunder at COB, (B) Seller may limit such period of deliveries at COB to three (3) years, without prejudice to Buyer’s ability to re-select COB as an Alternate Electricity Delivery Point in the future, and (C) Seller and Buyer are able to mutually agree upon the Day-Ahead Market Price and Real-Time Market Price that will apply for COB. Delivery of Electricity to Buyer at the Primary Electricity Delivery Point and the Secondary Electricity Delivery Points specified in Exhibit A shall be facilitated through submission of Inter-Scheduling Coordinator Trades (“ISTs”). The Project Participant shall designate a scheduling coordinator in the CAISO market for this purpose as specified in Exhibit G-2.

(d) The Day-Ahead Market Price and Real-Time Market Price for each Alternate Electricity Delivery Point, as applicable, shall be the price mutually agreed and identified by the Parties, or if no such price is identified for such Alternate Electricity Delivery Point, the

price shall be the Day-Ahead Market Price and Real-Time Market Price for such Alternate Electricity Delivery Point, as applicable, specified on Exhibit A for the Primary Electricity Delivery Point from which quantities are being shifted to such Alternate Electricity Delivery Point.

Section 5.2 Responsibility for Transportation; Permits.

(a) Gas.

(i) Seller shall obtain and pay for all processing, gathering, and transportation necessary for delivery of the Contract Quantity to each Delivery Point. Buyer shall obtain or cause to be obtained and pay for or cause payment to be made for all transportation necessary to receive the Contract Quantity at each Delivery Point and to transport the Contract Quantity from each Delivery Point.

(ii) Should either Party receive an operational flow order or other order or notice from a Transporter requiring action to be taken in connection with the Gas flowing under this Agreement (a "Critical Notice"), such Party shall notify or cause the notification of the other Party of the Critical Notice and provide or cause to be provided to the other Party a copy of same by electronic mail, or facsimile if requested, within a Commercially Reasonable timeframe. The Parties shall exercise Commercially Reasonable Efforts required by the Critical Notice within the time prescribed by the applicable Transporter. Each Party shall, in accordance with the procedures set forth in Section 19.1, indemnify, defend and hold harmless the other Party from any Claims associated with any Critical Notice (i) of which the indemnifying Party failed to give the indemnified Party the notice required under this Agreement or (ii) under which the indemnifying Party failed to take the action required by the Critical Notice within the time prescribed, *provided* the notice from the indemnified Party was timely delivered.

(b) Electricity. Seller shall arrange and be responsible for transmission service of the Contract Quantity to the Delivery Point and shall Schedule or arrange for Scheduling services with its Transmission Providers, to deliver Electricity to the Delivery Point. Buyer shall arrange and be responsible for transmission service at and from the Delivery Point and shall Schedule or arrange for Scheduling services with its Transmission Providers to receive Electricity at the Delivery Point.

Section 5.3 Title and Risk of Loss.

(a) Title to the Commodities delivered under this Agreement and risk of loss shall pass from Seller to Buyer at the Delivery Point; *provided* that the transfer of title and risk of loss for all Assigned Gas and Assigned Electricity shall be in accordance with the applicable Gas Assignment Agreement or PPA Assignment Agreement for any portion of the Contract Quantity for which an assignment agreement is in effect; *provided* furthermore that, notwithstanding anything to the contrary herein, no indemnity obligations shall apply as between the Parties with respect to any Assigned Product or Assigned Gas (as defined in a Gas Assignment Agreement).

(b) With respect to Gas, as between the Parties, Seller shall be deemed to be in exclusive control and possession of the Gas delivered under this Agreement, and responsible for any damage or injury caused thereby, prior to the time such Gas has been delivered to Buyer at the

Delivery Point. After delivery of Gas to Buyer at the Delivery Point, Buyer shall be deemed to be in exclusive control and possession thereof and responsible for any injury or damage caused thereby. Each Party (each, an “Indemnifying Party”) assumes all liability for and, subject to the provisions of Section 19.1, shall indemnify, defend and hold harmless the other Party from any Claims, including death of Persons, arising from any act or incident occurring when title to Gas is vested in the Indemnifying Party.

Section 5.4 Daily Flow Rates. For Gas other than any portion of the Gas Contract Quantity for which a Gas Assignment Agreement is in effect, for which flow rates will be addressed in the applicable Gas Assignment Agreement, Seller shall nominate, schedule and deliver, and Buyer shall nominate, schedule and take, the Contract Quantity of Gas during the Gas Delivery Period at each Delivery Point in accordance with standard Firm service requirements of the Receiving Transporter and Delivering Transporter at such Delivery Point, unless otherwise agreed by the Parties; provided that, for the avoidance of doubt, neither Party in any case shall be obligated to incur additional costs by procuring additional services, running imbalances or taking any other actions to accommodate non-standard scheduling requirements of the other Party.

Section 5.5 Imbalances. The Parties shall use Commercially Reasonable Efforts to avoid the imposition of any Imbalance Charges. If Buyer or Seller receives an invoice from a Transporter that includes Imbalance Charges related to the obligations of either Party under this Agreement, the Parties shall determine the validity as well as the cause of such Imbalance Charges. If the Imbalance Charges were incurred as a result of Buyer’s taking of quantities of Gas greater than or less than the Contract Quantity at any Delivery Point, then Buyer shall pay for such Imbalance Charges or reimburse Seller for such Imbalance Charges paid by Seller. If the Imbalance Charges were incurred as a result of Seller’s delivery of quantities of Gas greater than or less than the Contract Quantities at any Delivery Point, then Seller shall pay for such Imbalance Charges or reimburse Buyer for such Imbalance Charges paid by Buyer. Additionally, notwithstanding anything to the contrary in this Section 5.5, Seller shall have no liability for Imbalance Charges in respect of any Gas required to be scheduled or delivered under an Upstream Supply Contract.

Section 5.6 Communications Protocol. Seller and Buyer shall comply with the communications protocols set forth in Exhibit G-1 for Gas deliveries and Exhibit G-2 for Electricity deliveries; *provided* that, for any portion of the Contract Quantity for which a Gas Assignment Agreement or a PPA Assignment Agreement is in effect, Scheduling and shall be in accordance with the applicable assignment agreement.

Section 5.7 Gas Quality and Measurement. Buyer shall not be required to accept Gas delivered by Seller that does not meet the pressure, quality and heat content requirements of the Receiving Transporter as detailed in the applicable pipeline tariff. Buyer’s sole and exclusive remedy against Seller with respect to any Gas that fails to meet such pressure, quality and heat content requirements shall be the right to reject non-conforming Gas and to receive payment under Article IV. If such rejected Gas meets the pressure, quality and heat content requirements of the Delivering Transporter, but does not meet such requirements of the Receiving Transporter, any such rejection by Buyer and failure to deliver by Seller shall be deemed to be excused by Force Majeure. For the avoidance of doubt, the provisions of Article XI shall apply to any such event of Force Majeure. If such rejected Gas does not meet such requirements of either the Receiving

Transporter or the Delivering Transporter, Seller shall be deemed to have failed to deliver any such Gas that is properly rejected. With respect to any measurement of Gas delivered or received under this Agreement at any Delivery Point, the measurement of such Gas (including the definition of Btu used in making such measurement) by the operator of such Delivery Point shall be deemed to be conclusive; *provided*, however, if the operator of such Delivery Point revises its measurement statements for Gas, such revision shall be effective as the measurement of Gas for the purposes of this Agreement and may be corrected pursuant to Section 14.5. Notwithstanding the foregoing, but without prejudice to any right of Project Participant to reject Assigned Gas under and as defined in an Upstream Supply Contract⁵, measurement of Assigned Gas shall be as set forth in the applicable Upstream Supply Contract and Seller shall not have any liability for the failure of any Assigned Gas to meet any applicable quality requirements.

Section 5.8 Assigned Products. Neither Party shall have any liability under this Article V with respect to any portion of the Contract Quantity for which a Gas Assignment Agreement or a PPA Assignment Agreement is in effect.

ARTICLE VI. GAS ASSIGNMENT AGREEMENT

Section 6.1 Upstream Supply Contract Assignments. The Project Participant may assign and J. Aron may agree to assume a portion of the Project Participant's rights and obligations under an Upstream Supply Contract consistent with the terms set forth in Exhibit G-1.

Section 6.2 Adjustments to Contract Quantity. In connection with the execution of a Gas Assignment Agreement with an Assigned Contract Price (as defined in the relevant Gas Assignment Agreement) that is a fixed price, Seller shall revise Exhibit A to reflect appropriate adjustments to the Contract Quantity consistent with [Section 8.3 of Exhibit G-1]; provided that such adjustments shall be reversed consistent with [Section 8.3 of Exhibit G-1] following an early termination of the relevant Assignment Period.

ARTICLE VII. COMMODITY REMARKETING

Section 7.1 Commodity Remarketing. If the Project Participant is in default under its Commodity Supply Contract or does not require or is unable to receive all or any portion of the Commodities purchased by Buyer under the Agreement as a result of (a) Project Participant's decreased Gas requirements due to reduced generation requirements during the Gas Delivery Period, (b) decreased demand by Project Participant's retail customers or (c) a change in Law and requests that such Commodity be remarketed, then Buyer shall request (and pursuant to Section 4.2 may be deemed to request) remarketing services from Seller pursuant to the provisions of Exhibit C; provided that any remarketing request delivered under clause (c) above shall constitute a "Structural Remarketing Notice" and shall be subject to the following requirements:

⁵ OHS NTD: Will this be defined (consistent with the Commodity Supply Agreement) in the Gas Communications Protocol? If not, add definition in Article I. SM NTD: Thank you for clarifying. We have updated the definition in the Commodity Supply Contract to pick up Assignment Periods under Gas Assignment Agreements and PPA Assignment Agreements.

- Agreement;
- (i) a Structural Remarketing Notice may not be delivered prior to the date that is ten (10) years after the Execution Date of this
 - (ii) a Structural Remarketing Notice must be provided at least six (6) Months in advance of the requested remarketing services; and;
 - (iii) any Structural Remarketing Notice shall be subject to Seller's consent in its reasonable discretion.

If Buyer requests remarketing of any Assigned Electricity under any of the circumstances described in the preceding sentence, then Seller will have the right to terminate the Assignment Period applicable to such Assigned Electricity effective as of the first Hour to which such remarketing applies. If Seller elects to remarket any Assigned Electricity, Buyer and Seller shall negotiate in good faith to adjust the provisions of Exhibit C to reflect pricing, delivery and other terms related to such Assigned Electricity; provided that Seller shall have no obligation to remarket such Assigned Electricity unless and until Buyer and Seller have mutually agreed to such adjustments to Exhibit C

Section 7.2 Delegation of Authority. Buyer hereby acknowledges and agrees that Seller shall delegate its rights and obligations under Exhibit C to J. Aron pursuant to the Commodity Sale and Service Agreement subject to Section 11 of Exhibit C. Notwithstanding any such delegation, Seller shall remain liable to Buyer for the performance of all of Seller's duties and obligations under this Agreement, including under Exhibit C.

ARTICLE VIII. REPRESENTATIONS AND WARRANTIES

Section 8.1 Representations and Warranties. As a material inducement to entering into this Agreement, each Party, with respect to itself, hereby represents and warrants to the other Party as of the Execution Date as follows:

- (a) For Buyer as the representing Party, Buyer is a joint powers authority duly organized and validly existing under the laws of the State of California;
- (b) For Seller as the representing Party, it is duly organized and validly existing under the Laws of the state in which it is organized;
- (c) it has all requisite power and authority to conduct its business, to own its properties and to execute, deliver and perform its obligations under this Agreement;
- (d) there is no litigation, action, suit, proceeding with service of process accomplished with respect to such Party or investigation pending or, to the best of such Party's knowledge, (i) pending investigation or (ii) threatened litigation, action, suit or proceeding, in each case, before or by any Government Agency, and, in each case, which could reasonably be expected to materially and adversely affect the performance by such Party of its obligations under this Agreement or that questions the validity, binding effect or enforceability hereof, any action taken or to be taken by such Party pursuant hereto, or any of the transactions contemplated hereby;

(e) the execution, delivery and performance of this Agreement by such Party have been duly authorized by all necessary action on the part of such Party and do not require any approval or consent of any security holder of such Party or any holder (or any trustee for any holder) of any indebtedness or other obligation of such Party;

(f) this Agreement has been duly executed and delivered on behalf of such Party by an appropriate officer or authorized Person of such Party and constitutes the legal, valid and binding obligation of such Party, enforceable against it in accordance with its terms, as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium and similar Laws affecting creditors' rights generally and by general principles of equity;

(g) the execution, delivery and performance of this Agreement by such Party shall not violate any provision of any Law, rule, regulation, order, writ, judgment, decree or other legal or regulatory determination applicable to it;

(h) the execution, delivery and performance by such Party of this Agreement, and the consummation of the transactions contemplated hereby, including the incurrence by such Party of its financial obligations under this Agreement, shall not result in any violation of any term of any material contract or agreement applicable to it, or any of its charter or bylaws or of any license, permit, franchise, judgment, writ, injunction or regulation, decree, order, charter, Law, ordinance, rule or regulation applicable to it or any of its properties or to any obligations incurred by it or by which it or any of its properties or obligations are bound or affected, or of any determination or award of any arbitrator applicable to it, and shall not conflict with, or cause a breach of, or default under, any such term or result in the creation of any lien upon any of its properties or assets, except with respect to Buyer, the lien of the Bond Indenture and as otherwise contemplated by the Bond Indenture;⁶

(i) to the best of the knowledge and belief of such Party, no consent, approval, order or authorization of, or registration, declaration or filing with, or giving of notice to, obtaining of any license or permit from, or taking of any other action with respect to, any Government Agency is required in connection with the valid authorization, execution, delivery and performance by such Party of this Agreement or the consummation of any of the transactions contemplated hereby other than those that have been obtained; and

(j) it enters this Agreement as a bona-fide, arm's-length transaction involving the mutual exchange of consideration and, once executed by both Parties, considers this Agreement a legally enforceable contract.

Section 8.2 Additional Representations and Warranties of Buyer. As a material inducement to entering into this Agreement, Buyer hereby represents and warrants to Seller as of the Execution Date as follows:

⁶ OHS NTD: References to be updated based on contemplated structure following refunding. Will these be A&R? Definitions to be added as appropriate. SM NTD: There will be no Collateral Agency Agreement, Receivables Purchase Agreement or Intercreditor following refunding.

(a) Buyer is entering into this Agreement for the purpose of acquiring Commodities for sale to the Project Participant pursuant to the Commodity Supply Contract; and

(b) any amounts payable by Buyer under this Agreement shall (i) other than the Prepayment and except as otherwise provided in the Bond Indenture, be payable as an item of Operating Expense under (and as defined in) the Bond Indenture, and (ii) not constitute an indebtedness or liability of Buyer within the meaning of any constitutional or statutory limitation or restriction applicable to Buyer.

Section 8.3 Funding Agreement.

(a) Except (i) to cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the Funding Agreement, (ii) to insert such provisions clarifying matters or questions arising under the Funding Agreement as are necessary or desirable and are not contrary to or inconsistent therewith or (iii) to convert or supplement any provision in a manner consistent with the intent of the Funding Agreement and the other Transaction Documents, Seller agrees that it shall not agree to any amendment, alteration, assignment or modification to the Funding Agreement without receipt of (A) a Rating Confirmation and (B) the prior written consent of Buyer; provided that, for the avoidance of doubt, no such consent of Buyer shall be required in connection with (I) the replacement, refinancing or re-pricing of the Funding Agreement at the end of any Interest Rate Period in accordance with the terms of the Funding Agreement or (II) Seller's assignment of its interest in the Funding Agreement or consent to Funding Recipient's assignment of its interest in the Funding Agreement by Funding Recipient to the extent Seller provides a Rating Confirmation to Buyer with respect to any such assignment.

(b) To the extent an Early Termination Payment Date is designated hereunder, Seller agrees that it shall promptly withdraw the entire amount of the Funding Account under and as defined in the Funding Agreement to the extent permitted by the terms thereof. Additionally, Seller agrees that it shall not withdraw the Early Repayment Amount under and as defined in the Funding Agreement pursuant to the provision of Exhibit A to the Funding Agreement titled "Early Repayment Date and Early Repayment Amount" unless such Early Repayment Amount plus other available funds are sufficient for the early redemption of the Bonds.

Section 8.4 Warranty of Title. Seller warrants that it will have the right to convey and will transfer good and merchantable title to all Gas sold under this Agreement and delivered by it to Buyer, free and clear of all liens, encumbrances, and claims, *provided* that with respect to any portion of the Gas Contract Quantity for which a Gas Assignment Agreement is in effect, this warranty is limited to any liens, encumbrances and claims created by, through or under Seller. Seller assumes all liability for and, subject to the provisions of Section 19.1, shall indemnify, defend and hold harmless Buyer from any Claims arising from breach of this warranty.

Section 8.5 Disclaimer of Warranties. EXCEPT FOR THE WARRANTIES EXPRESSLY MADE BY BUYER AND SELLER IN THIS ARTICLE VIII, BUYER AND SELLER HEREBY DISCLAIM ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

**ARTICLE IX.
TAXES**

Seller shall (i) be responsible for all ad valorem, excise, severance, production and other taxes assessed with respect to Commodities (other than any portion of the Contract Quantity for which a Gas Assignment Agreement or a PPA Assignment is in effect) delivered pursuant to this Agreement upstream of the Delivery Point, and (ii) indemnify Buyer and its Affiliates for any such taxes paid by Buyer or its Affiliates. Buyer shall (i) be responsible for all such taxes assessed at or downstream of the Delivery Point, and (ii) indemnify Seller and its Affiliates for any such taxes paid by Seller or its Affiliates.

**ARTICLE X.
WAIVER OF JURY TRIAL**

TO THE EXTENT PERMITTED BY LAW, EACH OF THE PARTIES HEREBY AGREES TO WAIVE ITS RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING UNDER THIS AGREEMENT. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS AGREEMENT, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. EACH PARTY ACKNOWLEDGES THAT THIS WAIVER IS A MATERIAL INDUCEMENT TO ENTER INTO A BUSINESS RELATIONSHIP, THAT EACH HAS ALREADY RELIED ON THIS WAIVER IN ENTERING INTO THIS AGREEMENT, AND THAT EACH WILL CONTINUE TO RELY ON THIS WAIVER IN ITS RELATED FUTURE DEALINGS. EACH PARTY FURTHER WARRANTS AND REPRESENTS THAT IT HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL. THIS WAIVER IS IRREVOCABLE, MEANING THAT IT MAY NOT BE MODIFIED EITHER ORALLY OR IN WRITING (OTHER THAN BY MUTUAL WRITTEN WAIVER SPECIFICALLY REFERRING TO THIS Article X AND EXECUTED BY EACH OF THE PARTIES), AND THIS WAIVER SHALL APPLY TO ANY SUBSEQUENT AMENDMENTS, RENEWALS, SUPPLEMENTS OR MODIFICATIONS HERETO. IN THE EVENT OF LITIGATION, THIS AGREEMENT MAY BE FILED AS A WRITTEN CONSENT TO A TRIAL BY A COURT.

**ARTICLE XI.
FORCE MAJEURE**

Section 11.1 Applicability of Force Majeure. To the extent either Party is prevented by Force Majeure from carrying out, in whole or part, its obligations under this Agreement and such Party (the “Claiming Party”) gives notice and details of the Force Majeure to the other Party as soon as practicable, then the Claiming Party shall be excused from the performance of its obligations with respect to this Agreement (other than the obligation to make payments then due or becoming due with respect to performance prior to the Force Majeure). The Claiming Party shall mitigate the Force Majeure with all reasonable dispatch. For the duration of the Claiming Party’s non-performance (and only for such period), the non-Claiming Party shall

not be required to perform or resume performance of its obligations to the Claiming Party corresponding to the obligations of the Claiming Party excused by Force Majeure.

Section 11.2 Settlement of Labor Disputes. Notwithstanding anything to the contrary herein, the Parties agree that the settlement of strikes, lockouts or other industrial disturbances shall be within the sole discretion of the Party experiencing such disturbance, and the failure of a Party to settle such strikes, lockouts or other industrial disturbances shall not prevent the existence of Force Majeure or of reasonable dispatch to remedy the same.

ARTICLE XII. GOVERNMENTAL RULES AND REGULATIONS

Section 12.1 Compliance with Laws. This Agreement shall be subject to all present and future Laws of any Government Agency having jurisdiction, and neither Party has knowingly undertaken or will knowingly undertake or knowingly cause to be undertaken any activity that would conflict with such Laws; *provided*, however, that nothing herein shall be construed to restrict or limit either Party's right to object to or contest any such Law, or its application to this Agreement or the transactions undertaken hereunder, and neither acquiescence therein or compliance therewith for any period of time shall be construed as a waiver of such right.

Section 12.2 Contests. Excluding all matters involving a contractual dispute between the Parties, no Party shall contest, cause to be contested or in any way actively support the contest of the equity, fairness, reasonableness or lawfulness of any terms or conditions set forth or established pursuant to this Agreement, as those terms or conditions may be at issue before any Government Agency in any proceeding, if the successful result of such contest would be to preclude or excuse the performance of this Agreement by either Party.

Section 12.3 Defense of Agreement. Excluding all matters involving a contractual dispute between the Parties, each Party shall hereafter defend and support this Agreement before any Government Agency in any proceeding, if the substance, validity or enforceability of all or any part of this Agreement is hereafter directly challenged or if any proposed changes in regulatory practices or procedures would have the effect of making this Agreement invalid or unenforceable or would subject either Party to any greater or different regulation or jurisdiction that materially affects the rights or obligations of the Parties under this Agreement.

ARTICLE XIII. ASSIGNMENT

Neither Party shall assign this Agreement or any of its rights or obligations under this Agreement without the prior written consent of the other Party; *provided*, however, that:

(a) pursuant to the Bond Indenture, Buyer may, without the consent of Seller, transfer, sell, pledge, encumber or assign this Agreement to the Trustee in connection with any financing or other financial arrangements; *provided* that Buyer shall not assign this Agreement unless, contemporaneously with the effectiveness of such assignment, Buyer also assigns the Buyer Swap (and the Buyer Swap Custodial Agreement) to the same assignee;

(b) upon written notice to Buyer, Seller may, without Buyer's consent, assign this Agreement to an Affiliate of Seller, which assignment shall constitute a novation; provided that the assignee shall agree in writing to be bound by the terms and conditions of this Agreement and Seller shall not assign this Agreement unless (i) Seller delivers a Rating Confirmation to Buyer with respect to such assignment, (ii) contemporaneously with the effectiveness of such assignment, Seller also assigns the Seller Swaps, the Seller Swap Custodial Agreements and the SPE Master Custodial Agreement to the same assignee and either (A) Seller assigns the Funding Agreement and Commodity Sale and Service Agreement to the same assignee or (B) the assignee provides to Buyer a guarantee of its obligations by GSG (as defined in the Commodity Sale and Service Agreement) and GSG continues to guarantee the obligations of J. Aron (or any successor to or assignee of J. Aron) under the Commodity Sale and Service Agreement, and (iii) the assignee is a special purpose entity approved by Buyer or its obligations under this Agreement are guaranteed by a Funding Recipient to the satisfaction of Buyer; and

(c) if (i) Seller notifies Buyer that the Funding Agreement will not be replaced, refinanced, or re-priced as of the end of any Interest Rate Period, (ii) Seller is unable to provide, under the Re-Pricing Agreement, an estimated Available Discount Percentage (as defined in the Re-Pricing Agreement) that is equal to or greater than the highest Minimum Discount Percentage under the Commodity Supply Contract, or (iii) if Buyer can provide reasonable evidence that the Seller's estimated Reset Period Implied Rate (as defined in the Re-Pricing Agreement) is materially less than the rate Seller would offer to a substantially similar counterparty in an arm's length transaction on the same date, then, at the request of Buyer, Seller will reasonably cooperate with Buyer to cause Seller's (or Seller's Affiliate's, if applicable) interest in this Agreement, the Re-Pricing Agreement, the Seller Swap and any Specified Investment Agreement with a term that extends past the then-current Interest Rate Period to which Seller or any Affiliate is a party and all agreements related to any of the foregoing (the "Transaction Documents") to be novated to a replacement seller; *provided* that (w) a Rating Confirmation (as defined in the Bond Indenture) is obtained for any Bonds required to be tendered for purchase on the first Mandatory Purchase Date following the effective date of such novation, (x) the Swap Counterparty shall have provided its prior written consent to such assignment in accordance with the terms of the Seller Swap, (y) after giving effect to such novation, Seller will have no obligations (contingent or otherwise, including any obligation to make or repeat any representations or warranties other than basic representations on authority and the right to transfer its interests under this Agreement without encumbrances) or be required to make any payment under any Transaction Document or otherwise in connection with or following such novation other than any obligations that would have existed or payments that would have been required had this Agreement terminated as of the end of the last Reset Period that commenced prior to such novation, and (z) as it relates to clause (iii) above, Seller shall have a right to match the Reset Period Implied Rate provided by the potential novated counterparty.

ARTICLE XIV. PAYMENTS

Section 14.1 Monthly Statements.

(a) No later than the [7th] day of each Month during the Delivery Period (excluding the first Month of the Delivery Period) and the first Month following the end of the Delivery Period, Buyer shall deliver to Seller a statement (a "Buyer's Statement") listing (i) for

each purchase of Replacement Gas or Replacement Electricity, the quantity and replacement price applicable to such purchase, and (ii) any other amounts due to Buyer in connection with this Agreement with respect to the prior Month(s).

(b) No later than the [12th] day of each Month during the Delivery Period (excluding the first Month of the Delivery Period) and the first Month following the end of the Delivery Period (the “Billing Date”), Seller shall deliver a statement (a “Billing Statement”) to Buyer indicating (i) the total amount due to Buyer, if any, under Article IV, Article V and Article VII and Exhibit C with respect to the prior Month(s), (ii) any amounts due to Seller in connection with this Agreement with respect to the prior Month(s), and (iii) the net amount due to Buyer or Seller. If the actual quantity delivered is not known by the Billing Date, Seller may provisionally prepare a Billing Statement based on Seller’s best available knowledge of the quantity of Commodities delivered, which shall not exceed the sum of the Contract Quantity of all the Gas Days or Hours (as applicable) in such Month plus any make-up quantities delivered during such Month. The invoiced quantity and amounts paid thereon (with interest calculated on the amount overpaid or underpaid by Buyer at the Default Rate) will then be adjusted on the following Month’s Billing Statement, as actual delivery information becomes available based on the actual quantity delivered. The Parties acknowledge and agree that all amounts owed to and from Seller in connection with the Commodity Project shall be paid pursuant to the SPE Master Custodial Agreement, and the Billing Statement may be provided by J. Aron, as Seller’s agent, in the form of a consolidated statement regarding all amounts owed to and from Seller in connection with the Commodity Project for each Month, including payments to be made under this Agreement, the Funding Agreement, the Commodity Sale and Service Agreement and the Seller Swap.

(c) Upon request by either Party, the other Party shall deliver such supporting documentation of the foregoing as such requesting Party may reasonably request.

Section 14.2 Payment.

(a) If the Billing Statement indicates an amount due from Buyer, then Buyer shall remit such amount to Seller by wire transfer (pursuant to the instructions set forth in the SPE Master Custodial Agreement), in immediately available funds, on or before the later of (i) the 25th day of the Month following the most recent Month to which such Billing Statement relates, or (ii) the 10th day following Buyer’s receipt of Seller’s Billing Statement, or if either such day is not a Business Day, the following Business Day. If the Billing Statement indicates an amount due from Seller, then Seller shall remit such amount to Buyer by wire transfer (pursuant to Buyer’s instructions), in immediately available funds, on or before the later of (i) the 22nd day of the Month following the most recent Month to which such Billing Statement relates, or (ii) the 10th day following Seller’s receipt of Buyer’s Statement, or if either such day is not a Business Day, the preceding Business Day.

(b) If Buyer fails to issue a Buyer’s Statement with respect to any Month, Seller shall not be required to estimate any amounts due to Buyer for such Month, *provided* that Buyer may include any such amount on subsequent Buyer’s Statements issued within the next sixty (60) days. The sixty (60)-day deadline in this subsection (b) replaces the two (2)-year deadline in Section 14.5 with respect to any claim by any non-delivering Party of inaccuracy in any estimated invoice issued or payment made pursuant to this subsection (b).

Section 14.3 Payment of Disputed Amounts. If Seller disputes any amounts included in the Buyer's Statement, Seller shall (a) (except in the case of manifest error) nonetheless calculate the Billing Statement based on the amounts included in Buyer's Statement and (b) pay any amount required by the Billing Statement in accordance with Section 14.2 without regard to any right of set-off, counterclaim, recoupment or other defenses to payment that Seller may have; *provided*, however, that Seller shall have the right, after payment, to dispute any amounts included in a Buyer's Statement or otherwise used to calculate payments due under this Agreement pursuant to Section 14.5(b). If Buyer disputes any amounts included in the Billing Statement, Buyer may withhold payment to the extent of the disputed amount; *provided*, however, that interest shall be due at the Default Rate for any withheld amount later found to have been properly due.

Section 14.4 Late Payment. If a Party owing a net payment under Section 14.2 fails to remit the full amount payable within one Business Day of when due, interest on the unpaid portion shall accrue from the date due until the date of payment at the Default Rate.

Section 14.5 Audit; Adjustments.

(a) A Party shall have the right, at its own expense, upon reasonable notice to the other Party and at reasonable times, to examine and audit and to obtain copies of the relevant portion of the books, records, and telephone recordings of the other Party to the extent reasonably necessary, but only to such extent, to verify the accuracy of any statement, charge, payment, or computation made under this Agreement; *provided* that, notwithstanding the foregoing, to the extent any such examination and audit reveals any material discrepancy in the other Party's books and records, the examining Party shall have a right to be reimbursed by the other Party for costs reasonably incurred in connection with such examination and audit. This right to examine, audit, and obtain copies shall not be available with respect to proprietary information not directly relevant to transactions under this Agreement.

(b) Each Buyer's Statement and each Billing Statement shall be conclusively presumed final and accurate and all associated claims for under- or overpayments shall be deemed waived unless such Buyer's Statement or Billing Statement is objected to in writing, with adequate explanation and/or documentation, within two (2) years after the applicable Month of Commodity delivery.

(c) All retroactive adjustments shall be paid in full by the Party owing payment within 30 days of notice and substantiation of such inaccuracy. If the Parties are unable to agree upon any retroactive adjustments requested by either Party within the time period specified in Section 14.5(b), then either Party may pursue any remedies available with respect to such adjustments at law or in equity. Retroactive adjustments for payments made based on incorrect Buyer's Statements or Billing Statements shall bear interest at the Default Rate from the date such payment was made. Buyer shall cause Project Participant to comply with the provisions of Section 14.5(a) to the extent necessary to allow Seller to verify any amounts due under this Agreement.

Section 14.6 Netting. The Parties shall net all amounts due and owing, including any past due amounts (which, for the avoidance of doubt, shall include any accrued interest), arising under this Agreement such that the Party owing the greater amount shall make a single payment of the net amount to the other Party in accordance with this Article XIV. Notwithstanding

the foregoing, Seller shall not be entitled to net (i) any amounts that are in dispute or (ii) any payments due to Seller against (A) the Termination Payment if it becomes due, or (B) any payments due from Seller pursuant to Article IV, Article V or Exhibit C.

ARTICLE XV. PPA ASSIGNMENT AGREEMENTS

Section 15.1 Assignment by Project Participant. The Project Participant and the Buyer have agreed pursuant to Article XV of the Commodity Supply Contract that the Project Participant has the right to propose to assign certain Assigned Rights and Obligations under one or more power purchase agreements to J. Aron. If the Project Participant does so, and to the extent such assignment is accepted by J. Aron, Buyer, J. Aron, and the Project Participant have agreed to comply with Article XV of the Commodity Supply Contract. Following the effectiveness of any PPA Assignment Agreement and Assignment Schedule executed pursuant thereto, the Hourly Quantities of Electricity shall be reduced as contemplated by Article XV and Exhibit H of the Commodity Supply Contract to reflect the Commodities acquired by Seller pursuant to such assignment. References to Article XV and Exhibit H of the Commodity Supply Contract mean that Commodity Supply Contract as it originally exists, without regard to any modification, amendments, supplements or waivers thereto (including any embedded definitions or cross-referenced provisions) that have not been consented to by J. Aron in its sole discretion.

Section 15.2 Adjustments to Swaps. The Parties agree to issue appropriate notices to cause the Buyer Swap and the Seller Swap to be revised for each Assignment Period such that the notional quantity under such swaps will be reduced to reflect the Reduced Hourly Quantity determined pursuant to Article XV of the Commodity Supply Contract; *provided that* such revisions will revert back effective as of the end of the Assignment Period pursuant to the terms of the Assignment Schedule and the applicable PPA Assignment Agreement.

Section 15.3 Early Termination of Assignment Period. Except for any Assignment Period that terminates contemporaneously with this Agreement, upon termination for any reason of the Assignment Period for any PPA Assignment Agreement, the Hourly Quantity shall be increased for all future periods to reverse any reductions to the Hourly Quantity made in connection with such PPA Assignment Agreement.

ARTICLE XVI. NOTICES

Any notice, demand, statement or request required or authorized by this Agreement to be given by one Party to the other Party (or to a third party) shall be in writing and shall either be sent by email transmission, courier, or personal delivery (including overnight delivery service) to each of the notice recipients and addresses specified in Exhibit B for the receiving Party. Any such notice, demand, statement or request shall be deemed to be given (i) when delivered by email transmission, or (ii) when actually received if delivered by courier or personal delivery (including overnight delivery service). Each Party shall have the right, upon 10 days' prior written notice to the other Party, to change its list of notice recipients and addresses in Exhibit B. The Parties may mutually agree in writing at any time to deliver notices, demands or requests through alternate or additional methods. Notwithstanding the foregoing, either Party may at any time notify the other

that any notice, demand, statement or request to it must be provided by email transmission for a specified period of time or until further notice, and any communications delivered by means other than email transmission during such time shall be ineffective.

**ARTICLE XVII.
DEFAULT; REMEDIES; TERMINATION**

Section 17.1 Commodity Delivery Termination Events and Termination Payment Events. Each event listed on the table below constitutes a “Commodity Delivery Termination Event”. This table also specifies the potential Terminating Party for each Commodity Delivery Termination Event and identifies which Commodity Delivery Termination Events are also Termination Payment Events. For each Commodity Delivery Termination Event where the potential Terminating Party is listed as “Automatic”, such event is an “Automatic Commodity Delivery Termination Event” and each other Commodity Delivery Termination Event is an “Optional Commodity Delivery Termination Event.”

[Table on following page.]

<u>Event Related to:</u>	<u>Commodity Delivery Termination Event:</u>	<u>Potential Terminating Party:</u>	<u>Termination Payment Event?</u>
a) Failure of Seller to pay Buyer due to Funding Recipient failure to pay Seller	Seller fails to pay when due any amounts owed to Buyer pursuant to this Agreement because of a failure by Funding Recipient to pay when due any amounts owed to Seller pursuant to the Funding Agreement and such failure continues for 30 days after Buyer gives notice thereof to Seller.	Automatic	Yes
b) Failure of bond remarketing or re-pricing of Funding Agreement	As of one week prior to the beginning of the first Month following a Reset Period, either: (i) Buyer has not entered into a bond purchase agreement, firm remarketing agreement or similar agreement with respect to the remarketing or refunding of the existing Bonds; or (ii) Seller is unable to replace, refinance or re-price the Funding Agreement with Funding Recipient or a replacement Funding Recipient for a subsequent Reset Period.	Automatic	Yes
c) Failed Remarketing	A Failed Remarketing occurs.	Automatic	Yes
d) Ledger Event	The occurrence of a Ledger Event.	Seller	No
e) Failure to purchase Identified Receivables (as defined in Exhibit E)	Both: (i) Seller has received a Call Receivables Offer (as defined in Exhibit E) pursuant to Section 2.2(a) of the Exhibit E and (ii) Seller has not exercised or is deemed not to have exercised its related option to purchase the Identified Receivables described in such Call Receivables Offer.	Automatic	No
f) Designation of an Early Termination Date (as defined under the Commodity Sale and Service Agreement)	J. Aron designates an Early Termination Date (as defined in the Commodity Sale and Service Agreement) under the Commodity Sale and Service Agreement due to one or more CSC Remarketing Elections for any Reset Period by Project Participant(s) representing more than 50% of the Contract Quantities in Commodity Units for such Reset Period.	Automatic	Yes

<u>Event Related to:</u>	<u>Commodity Delivery Termination Event:</u>	<u>Potential Terminating Party:</u>	<u>Termination Payment Event?</u>
g) Termination of Commodity Sale and Service Agreement and Failure to Replace J. Aron	<p>Both:</p> <p>(i) an Early Termination Date (as defined in the Commodity Sale and Service Agreement) occurs under the Commodity Sale and Service Agreement]for any reason other than as set forth in Section 17.1(f)], and</p> <p>(ii) Seller is unable to enter into a replacement Commodity Sale and Service Agreement with substantially the same terms or terms otherwise approved by Buyer by the date that is 120 days following such Early Termination Date under the Commodity Sale and Service Agreement.</p> <p>For the avoidance of doubt, Seller may only enter into such a replacement Commodity Sale and Service Agreement described under clause (ii) if (A) the GSG Guaranty (as defined in the Commodity Sale and Service Agreement) applies to the obligations of the replacement seller thereunder or (B) Seller delivers a Rating Confirmation to Buyer with respect to its entry into such replacement Commodity Sale and Service Agreement.</p>	Automatic	No
h) Termination of a Buyer Swap	<p>Except in the case where an Automatic Commodity Delivery Termination Event has occurred under <u>Sections 17.1(e)</u> [Failure to Purchase Identified Receivables], [17.1(f) [Designation of an Early Termination Date (as defined under the Commodity Sale and Service Agreement)], <u>17.1(g)</u> [Termination of Commodity Sale and Service Agreement], <u>17.1(i)</u> [Termination of a Buyer Swap for Certain Buyer Defaults] or <u>17.1(j)</u> [Termination of Seller Swap for Seller Defaults], both:</p> <p>(i) an Early Termination Date (as defined in the Buyer Swap) is designated by a Swap Counterparty pursuant to the terms of a Buyer Swap or occurs automatically pursuant to the terms of a Buyer Swap based on a Termination Event where Buyer is the sole Affected Party (as each term is defined in the Buyer Swap), and</p> <p>(ii) either the corresponding Seller Swap or such Buyer Swap is not replaced within the Swap Replacement Period.</p>	Seller	No
i) Termination of a Buyer Swap for	An Early Termination Date (as defined in the Buyer Swap) is designated by a Swap Counterparty pursuant to the terms of a Buyer Swap based on an	Automatic	No

<u>Event Related to:</u>	<u>Commodity Delivery Termination Event:</u>	<u>Potential Terminating Party:</u>	<u>Termination Payment Event?</u>
Certain Buyer Defaults and Termination Events	Event of Default under Section 5(a)(vii) (Bankruptcy) of a Buyer Swap where Buyer is the Defaulting Party (as each term is defined in the Buyer Swap).		
j) Termination of a Seller Swap for Seller Defaults and Termination Events	<p>Both:</p> <p>(i) an Early Termination Date (as defined in the Seller Swap) is designated by a Swap Counterparty pursuant to the terms of a Seller Swap based on an Event of Default where Seller is the Defaulting Party or a Termination Event where Seller is the sole Affected Party (as each term is defined in the Seller Swap) or otherwise occurs automatically pursuant to the terms of a Seller Swap, but excluding any termination as a result of the termination of this Agreement based on a Commodity Delivery Termination Event under <u>Section 17.1(d)</u> or <u>Section 17.1(h)</u>, and</p> <p>(ii) such Seller Swap or the corresponding Buyer Swap is not replaced within the Swap Replacement Period.</p>	Automatic	No

Section 17.2 Payments Following a Ledger Event. Following the occurrence of a Ledger Event, Seller shall pay to Buyer any amounts that become payable from J. Aron to Seller pursuant to Section 17.6 of the Commodity Sale and Service Agreement, which amounts will accrue from the date of a Ledger Event until (but not including) the date on which a Termination Payment Event occurs.

Section 17.3 Reserved.

Section 17.4 Remedies and Termination.

(a) Automatic Commodity Delivery Termination Event. Upon the occurrence of any Automatic Commodity Delivery Termination Event, a Commodity Delivery Termination Date shall be deemed to be designated as of the end of the Month in which the Automatic Commodity Delivery Termination Event occurs.

(b) Optional Commodity Delivery Termination Event. If at any time an Optional Commodity Delivery Termination Event has occurred and is continuing, then the Terminating Party, by notice to the other Party specifying the relevant Optional Commodity Delivery Termination Event, may designate a day not earlier than the last day of the Month in which such notice is deemed given under Article XVI as the Commodity Delivery Termination Date; provided, however, that with respect to an Optional Commodity Delivery Termination Event related to a Buyer Swap or Seller Swap, the Terminating Party may, at any time after the commencement of the Swap Replacement Period, conditionally designate a Commodity Delivery Termination Date, with such designation being conditioned upon (i) the termination and failure to replace either the corresponding Seller Swap or such Buyer Swap and (ii) the Commodity Delivery Termination Date occurring no earlier than the last day of the Month in which the Swap Replacement Period ends.

(c) Effect of Commodity Delivery Termination Date. As of the Commodity Delivery Termination Date, (i) the Delivery Period shall end, (ii) the obligation of Buyer to receive delivery of Commodities from Seller under this Agreement shall terminate, and (iii) the obligation of Seller to Schedule or make any further deliveries of Commodities to Buyer under this Agreement shall terminate and, unless such Commodity Delivery Termination Date resulted from a Termination Payment Event, such obligation to deliver Commodities shall be replaced with a continuing obligation to make payment of the amounts set forth in Exhibit D-3 to Buyer until the earlier of (A) the Month in which a Termination Payment Event occurs and (B) the last due date for such payments under Exhibit D-3. For the avoidance of doubt, (i) except as set forth in this Section 17.4(c) and in Section 17.4(d), this Agreement will continue past a Commodity Delivery Termination Date, and (ii) a Termination Payment Event may arise contemporaneously with a Commodity Delivery Termination Date or at any time thereafter and the occurrence of a Commodity Delivery Termination Date shall not prevent the occurrence of a Termination Payment Event.

(d) Termination Payment Event; Early Termination Payment Date. A Termination Payment Event shall occur upon (i) a Commodity Delivery Termination Event that is

specified as a Termination Payment Event in Section 17.1 or (ii) a J. Aron Acceleration Option. Following a Termination Payment Event, Seller on the Early Termination Payment Date shall (A) pay the Termination Payment and (B) if applicable, pay the Additional Termination Payment, in each case, to the Trustee pursuant to payment instructions issued by Buyer or, in the absence of such instructions, by wire transfer. Such amounts shall be paid together with interest thereon (before as well as after judgment) from (and including) the Early Termination Payment Date to (but excluding) the date such amount is paid, at the Default Rate. The obligation of Seller to pay the Termination Payment on the Early Termination Payment Date is unconditional, irrespective of the validity or enforceability of this Agreement or any other agreement contemplated hereby, any waiver or consent by Buyer, or any other circumstances that might otherwise constitute a legal or equitable discharge of Seller or a defense of Seller to pay the Termination Payment. Seller waives all rights to set-off, counterclaim, recoupment and any other defenses that might otherwise be available to Seller with regard to Seller's obligation to pay the Termination Payment on the Early Termination Payment Date.

(e) Acknowledgement of Parties. The Parties acknowledge that it is impractical and difficult to assess actual damages as a result of a termination of the Delivery Period under this Agreement, and the Parties therefore agree that the payment of the Termination Payment and any applicable Additional Termination Payment or the continued payment of amounts specified in Exhibit D-3, as applicable, is a fair and reasonable pre-estimate of the actual damages that would be incurred by Buyer as a result of termination of the Delivery Period under this Agreement for any reason and is not a penalty.

(f) Exclusive Termination Rights. Neither this Agreement nor the Delivery Period may be terminated for any reason except as specified in this Article XVII and in Section 2.2. Except with respect to amounts due for periods prior to the Commodity Delivery Termination Date, the continued payment of amounts required to be made under Section 17.4(c), and, as applicable, the payment of the Termination Payment and any Additional Termination Payment shall be the sole and exclusive remedy for each Party upon the termination of the Delivery Period and this Agreement for any reason, including as a result of rejection of this Agreement by either Party in any bankruptcy proceedings.

(g) Payment of Investment Agreement Breakage Costs. In the event that a payment in respect of breakage costs becomes due from Buyer under a Specified Investment Agreement due to the occurrence of an Early Termination Payment Date, Seller shall pay to Buyer an amount equal to the amount of such payment no later than the later of (A) one Business Day prior to the date such payment is required to be paid by Buyer pursuant to such Specified Investment Agreement and (B) one Business Day following receipt by Seller of a statement setting forth in reasonable detail the amount of such payment. In the event that a payment in respect of breakage costs becomes payable to Buyer under a Specified Investment Agreement due to the occurrence of a Commodity Delivery Termination Date, Buyer shall pay to Seller an amount equal to the amount of such payment no later than one Business Day following receipt of such payment by Buyer.

Section 17.5 Replacement of Swaps.

(a) Neither Party shall exercise any optional right it may have to terminate this Agreement as a result of the termination of any Seller Swap or any Buyer Swap without first complying with this Section 17.5. Each of Buyer and Seller agrees that it will not replace any Buyer Swap or Seller Swap, as applicable, unless the other Party is replacing its Buyer Swap or Seller Swap, as applicable, with the same replacement Swap Counterparty.

(b) If:

- (i) any Buyer Swap or any Seller Swap terminates,
- (ii) Buyer or Seller delivers a termination notice under a Buyer Swap or Seller Swap,
- (iii) a Swap Counterparty delivers a termination notice under a Buyer Swap or Seller Swap, or
- (iv) any Buyer Swap or any Seller Swap is otherwise reasonably anticipated to become subject to immediate termination,

then each Party whose swap is affected shall notify the other Party of the existence of such circumstances and identify the affected Buyer Swap or Seller Swap (the “Affected Swap”).

(c) Following receipt of a notice under Section 17.5(b), the Parties shall attempt to replace both the Affected Swap and the corresponding unaffected Seller Swap or Buyer Swap with the same Swap Counterparty (the “Unaffected Swap”) by:

(i) if a Buyer Swap and a Seller Swap with another Swap Counterparty are in effect and otherwise are not subject to termination, (A) exercise any rights they may have to increase their notional quantities under such Buyer Swap and Seller Swap in order to effect a replacement upon termination of the Affected Swap (which increase shall be deemed to be a replacement of both the Buyer Swap and Seller Swap for purposes of Section 17.5 if the full notional quantities of the Affected Swap are thereby replaced), and (B) subsequent to such a replacement, Seller and Buyer shall cooperate in good faith to locate replacement agreements with a second Swap Counterparty and, upon locating a second Swap Counterparty, Seller and Buyer shall reduce their notional quantities under the remaining Seller Swap and Buyer Swap to their original levels and enter into a replacement Seller Swap and Buyer Swap with the replacement Swap Counterparty for the remaining notional quantities; or

(ii) to the extent Seller or Buyer cannot increase their notional quantities under another Buyer Swap and Seller Swap as contemplated by clause (i), cooperate in good faith to locate replacement agreements with an alternate Swap Counterparty to replace both the relevant Seller Swap and Buyer Swap within the Swap Replacement Period.

(d) The “Swap Replacement Period” is a period (I) commencing on the earlier of the date of (x) any termination of a Buyer Swap or Seller Swap designated by a Swap Counterparty, and (y) delivery of a notice of anticipated termination of a Buyer Swap or Seller

Swap by a Swap Counterparty, and (II) ending 60 days after the commencement of the Swap Replacement Period, provided that if during a Swap Replacement Period Seller:

- (i) presents to Buyer a proposed alternate Swap Counterparty,
- (ii) requests in writing that Buyer enter into a replacement swap with such alternate Swap Counterparty, and
- (iii) agrees to pay Buyer's reasonable expenses in connection therewith,

then, to the extent permitted by the Buyer Swap and the Bond Indenture and as requested by Seller, Buyer shall: (A) enter into a master agreement with such alternate Swap Counterparty and (B) either (1) terminate the Buyer Swap when permitted thereby and enter into a replacement transaction under such new master agreement to the same effect as the terminated Buyer Swap, (2) cause such Buyer Swap to be novated to such replacement Swap Counterparty, or (3) reduce the notional quantities under its existing Buyer Swap to the level prior to the increase thereof

(e) If a Seller Swap terminates or is no longer in effect and a Prepay LLC Payments Period (as defined in the Seller Swap Custodial Agreements) is in effect, then, during such Prepay LLC Payments Period, Seller in connection with the delivery of Commodities hereunder shall comply with the terms of the applicable Seller Swap Custodial Agreement and make all payments as and when required under such Seller Swap Custodial Agreement. If a Buyer Swap terminates or is no longer in effect and an Issuer Payments Period (as defined in the Buyer Swap Custodial Agreements) is in effect, then, during such Issuer Payments Period, Buyer in connection with the delivery of Commodities hereunder shall comply with the terms of the applicable Buyer Swap Custodial Agreement and make all payments as and when required under such Buyer Swap Custodial Agreement. The Parties agree that during any Prepay LLC Payments Period and during any Issuer Payments Period, Seller shall act as calculation agent under the applicable Seller Swap Custodial Agreement or the applicable Buyer Swap Custodial Agreement with respect to any terminated Seller Swap or Buyer Swap. Seller agrees not to permit any amendment or other modification to a Seller Swap Custodial Agreement that could adversely affect the right of Buyer to receive payments pursuant such Seller Swap Custodial Agreement. Buyer agrees not to permit any amendment or other modification to a Buyer Swap Custodial Agreement that could adversely affect the right of Seller to receive payments pursuant to such Buyer Swap Custodial Agreement.

Section 17.6 Present Assignment and Waiver of Right to Additional Termination Payments.

(a) The Parties hereto acknowledge that (i) the terms of the Buyer Swap do not entitle Buyer to any payments in respect of any termination of the Buyer Swap other than for Unpaid Amounts (as therein defined), (ii) the terms of the Seller Swap do not entitle the Swap Counterparty to any payments in respect of any termination of a Seller Swap other than in respect of Unpaid Amounts (as defined therein), and (iii) pursuant to the terms of the Buyer Swap, the Swap Counterparty has assigned to Buyer all rights to any payments and rights to receive payments that such Swap Counterparty receives or becomes entitled to receive in the future arising as a result of or otherwise in respect of any early termination of a Seller Swap, excluding only any right for

the Swap Counterparty to receive Unpaid Amounts (as defined therein) (any such payment under clause (iii), excluding any such Unpaid Amounts, a “Seller Swap MTM Payment”). As additional consideration hereunder, Buyer hereby transfers and assigns to Seller all of Buyer’s right, title, and interest to all payments and rights to receive payments, if any, that Buyer receives or becomes entitled to receive in the future arising as a result of or otherwise in respect of a Seller Swap MTM Payment. Buyer agrees that it will not take any steps to enforce any right to receive any payments that it has assigned to Seller pursuant to this Section 17.6(a).

(b) The Parties further acknowledge that the terms of the Seller Swaps do not entitle Seller to any payments in respect of any termination of a Seller Swap other than for Unpaid Amounts (as defined therein). Nonetheless, Seller hereby presently transfers and assigns to Buyer all of Seller’s right, title and interest to any payments and rights to receive payments that Seller receives or becomes entitled to receive in the future arising as a result of or otherwise in respect of any early termination of a Seller Swap, excluding only any right for Seller to receive Unpaid Amounts thereunder.

Section 17.7 Limitation on Damages. THE PARTIES CONFIRM THAT THE EXPRESS REMEDIES AND MEASURES OF DAMAGES PROVIDED IN THIS AGREEMENT SATISFY THE ESSENTIAL PURPOSES HEREOF. FOR BREACH OF ANY PROVISION FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS HEREIN PROVIDED, SUCH EXPRESS REMEDY OR MEASURE OF DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY, THE OBLIGOR’S LIABILITY SHALL BE LIMITED AS SET FORTH IN SUCH PROVISION, AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. NEITHER PARTY SHALL BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY, OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION, OR OTHERWISE. IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING WITHOUT LIMITATION THE NEGLIGENCE OF EITHER PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE. TO THE EXTENT ANY DAMAGES REQUIRED TO BE PAID UNDER THIS AGREEMENT ARE LIQUIDATED, THE PARTIES ACKNOWLEDGE THAT THE DAMAGES ARE DIFFICULT OR IMPOSSIBLE TO DETERMINE, OTHERWISE OBTAINING AN ADEQUATE REMEDY IS INCONVENIENT, AND THE LIQUIDATED DAMAGES CONSTITUTE A REASONABLE APPROXIMATION OF THE HARM OR LOSS. IN DETERMINING THE APPROPRIATE MEASURE OF DAMAGES THAT WOULD MAKE THE PARTIES WHOLE, THE PARTIES HAVE THOROUGHLY CONSIDERED, INTER ALIA, THE UNCERTAINTY OF FLUCTUATIONS IN COMMODITY PRICES, THE ABILITY AND INTENTION OF THE PARTIES TO HEDGE SUCH FLUCTUATIONS, THE BARGAINED-FOR ALLOCATION OF RISK, THE KNOWLEDGE, SOPHISTICATION AND EQUAL BARGAINING POWER OF THE PARTIES, THE ARMS-LENGTH NATURE OF THE NEGOTIATIONS, THE SPECIAL CIRCUMSTANCES OF THIS TRANSACTION, THE ACCOUNTING AND TAX TREATMENT OF THE TRANSACTION BY THE PARTIES, AND THE ENTERING INTO OF OTHER TRANSACTIONS IN RELIANCE ON THE ENFORCEABILITY OF THE LIQUIDATED DAMAGES PROVISIONS CONTAINED HEREIN. THE PARTIES

ACKNOWLEDGE THAT THIS IS A SALE OF GOODS SUBJECT TO ARTICLE 2 OF THE NEW YORK UNIFORM COMMERCIAL CODE, INCLUDING WITHOUT LIMITATION, §§ 2-706(6), 2-711, 2-718, AND 2-719.

Section 17.8 Option to Purchase Bonds. In connection with any new Interest Rate Period established under the Bond Indenture after the initial Interest Rate Period, Seller shall have the option to purchase Bonds to be remarketed on the relevant Mandatory Purchase Date by delivering written notice to Buyer and the Trustee no later than the last Business Day of the Reset Period that Seller will purchase a quantity of Bonds necessary to avoid the occurrence of a Failed Remarketing. In the event that Seller exercises such option, (x) Seller shall be obligated to pay the purchase price of such Bonds in immediately available funds on the Mandatory Purchase Date, and (y) to the extent any CSC Remarketing Elections are in effect with respect to the Reset Period commencing immediately prior to such Interest Rate Period, then Seller shall be required to remarket the Contract Quantities associated with such CSC Remarketing Elections, provided that:

- (a) Seller shall be entitled to purchase such Commodities for its own account,
- (b) for all such Commodities, regardless of how it is remarketed, Seller shall pay Buyer the amount determined pursuant to Section 5(d)(i) of Exhibit C, and
- (c) to the extent that it is determined that interest on the Bonds purchased by Seller is not excluded from gross income for federal income tax purposes, Section 7 through Section 10 of Exhibit C shall not apply to any such remarketing.

Section 17.9 Termination Payment Adjustment Schedule. Seller shall prepare revisions to the then-current Exhibit D-2 (Termination Payment Adjustment Schedule) in connection with each successive Interest Rate Period pursuant to the terms of the Re-Pricing Agreement by delivering a revised Exhibit D-2 to Buyer no later than the last day of the applicable Reset Period, in which case such amendments will be effective as of the first day of the next Interest Rate Period.

ARTICLE XVIII. RECEIVABLES PURCHASES

In accordance with the provisions of Exhibit E, Seller has the option to purchase Call Receivables (as defined in Exhibit E). The Parties acknowledge and agree that any Call Receivables purchased by Seller under Exhibit E shall be re-purchased by J. Aron from Seller to the extent the conditions set forth in Exhibit C of the Commodity Sale and Service Agreement are satisfied.

ARTICLE XIX. MISCELLANEOUS

Section 19.1 Indemnification Procedure. With respect to each indemnification included in this Agreement, the indemnity is given to the fullest extent permitted by applicable Law and the following provisions shall be applicable. The indemnified Party shall promptly notify the indemnifying Party in writing of any Claim and the indemnifying Party shall have the right to

assume its investigation and defense, including employment of counsel, and shall be obligated to pay related court costs, attorneys' fees and experts' fees and to post any appeals bonds; *provided*, however, that the indemnified Party shall have the right to employ at its expense separate counsel and participate in the defense of any Claim. The indemnifying Party shall not be liable for any settlement of a Claim without its express written consent thereto. In order to prevent double recovery, the indemnified Party shall reimburse the indemnifying Party for payments or costs incurred in respect of an indemnity with the proceeds of any judgment, insurance, bond, surety or other recovery made by the indemnified Party with respect to a covered event.

Section 19.2 Deliveries. No later than delivery of the Prepayment, Buyer will deliver to Seller a copy of the Bond Indenture. The following documents shall be executed and delivered by the Parties contemporaneously with the execution of this Agreement (unless otherwise specified):

(a) by Seller no later than the date of issuance of the Bonds, a copy of the Funding Agreement;

(b) by Buyer, a certificate of the Secretary or Assistant Secretary of Buyer setting forth (i) the resolutions of its governing body with respect to the authorization of Buyer to execute and deliver this Agreement, the Bond Indenture and the Commodity Supply Contract, (ii) the appropriate individuals who are authorized to sign such agreements, (iii) specimen signatures of such authorized individuals, and (iv) the organization documents of Buyer, certified as being true and complete; and

(c) by Seller, evidence reasonably satisfactory to Buyer of (i) Seller's authority to execute and deliver this Agreement and (ii) the appropriate individuals who are authorized to sign this Agreement.

Section 19.3 Entirety; Amendments.

(a) This Agreement, the Receivables Purchase Agreement and the Re-Pricing Agreement, including the exhibits and attachments hereto and thereto, constitutes the entire agreement between the Parties and supersedes all prior discussions and agreements between the Parties with respect to the subject matter hereof. There are no prior or contemporaneous agreements or representations affecting the same subject matter other than those expressed herein and in the Receivables Purchase Agreement and the Re-Pricing Agreement. Except for any matters that, in accordance with the express provisions of this Agreement, may be resolved by oral agreement between the Parties, no amendment, modification, supplement or change hereto shall be enforceable unless reduced to writing and executed by both Parties.

(b) If a Ledger Event occurs, then Buyer and Seller may, upon mutual agreement in each Party's sole discretion, amend this Agreement to reduce the Contract Quantity for one or more subsequent Months and to obligate Seller to pay the Trustee for the account of Buyer, an amount sufficient, together with other funds available under the terms of the Bond Indenture for such purpose, to pay the redemption price of such Bonds due on such redemption date and any settlement payable by Buyer due to the corresponding amendment to the Buyer Swap, and Buyer and Seller may simultaneously amend Exhibit D to reduce the Termination Payment

for one or more such Months, but in each case only if Buyer and Seller have delivered to the Trustee:

- (i) An executed counterpart of such amendment;
- (ii) An executed counterpart of an amendment to the Commodity Supply Contract reducing the Contract Quantity to be sold and delivered thereunder in the same Months by the same quantities;
- (iii) An executed counterpart of an amendment to the Buyer Swap reducing the notional amounts thereunder for the same Months by the same quantities;
- (iv) A revised Schedule I and, if necessary, Schedule II to the Bond Indenture and any applicable notices required by the Bond Indenture in connection with any related partial redemption;
- (v) An Accountant's Certificate (as defined in the Bond Indenture) to the effect that each of (A) the scheduled Termination Payments for this Agreement for each Month thereafter is equal to or exceeds the aggregate principal amount of and interest on the Bonds scheduled to remain outstanding at the beginning of such Month, assuming that the Bonds are redeemed in accordance with the Bond Indenture, less the scheduled balance of the Debt Service Fund (as defined in the Bond Indenture) at the end of such Month and (B) the expected cashflow to the Trust Estate (as defined in the Bond Indenture) is sufficient to meet the ongoing debt service for the Bonds scheduled to remain outstanding; and
- (vi) A Rating Confirmation (as defined in the Bond Indenture) in respect of such amendments and redemption.

Section 19.4 Governing Law. THIS AGREEMENT AND THE RIGHTS AND DUTIES OF THE PARTIES UNDER THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED, ENFORCED AND PERFORMED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO ANY CONFLICTS OF LAW PRINCIPLE THAT WOULD DIRECT THE APPLICATION OF ANOTHER JURISDICTION'S LAW; *PROVIDED*, HOWEVER, THAT THE AUTHORITY OF BUYER TO ENTER INTO AND PERFORM ITS OBLIGATIONS UNDER THIS AGREEMENT SHALL BE DETERMINED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA.

Section 19.5 Non-Waiver. No waiver of any breach of any of the terms of this Agreement shall be effective unless such waiver is in writing and signed by the Party against whom such waiver is claimed. No waiver of any breach shall be deemed a waiver of any other subsequent breach.

Section 19.6 Severability. If any provision of this Agreement, or the application thereof, shall for any reason be invalid or unenforceable, then to the extent of such invalidity or unenforceability, the remainder of this Agreement and the application of such provision to other Persons or circumstances shall not be affected thereby, but rather shall be enforced to the maximum extent permissible under applicable Law, so long as the economic and legal substance of the

transactions contemplated hereby is not affected in any materially adverse manner as to either Party.

Section 19.7 Exhibits. Any and all Exhibits referenced in this Agreement are hereby incorporated herein by reference and shall be deemed to be an integral part hereof.

Section 19.8 Winding Up Arrangements. All indemnity and confidentiality obligations, audit rights, and other provisions specifically providing for survival shall survive the expiration or termination of this Agreement. The expiration or termination of this Agreement shall not relieve either Party of (a) any unfulfilled obligation or undischarged liability of such Party on the date of such termination or (b) the consequences of any breach or default of any warranty or covenant contained in this Agreement. All obligations and liabilities described in the preceding sentence of this Section 19.8, and applicable provisions of this Agreement creating or relating to such obligations and liabilities, shall survive such expiration or termination.

Section 19.9 Relationships of Parties. The Parties shall not be deemed to be in a relationship of partners or joint venturers by virtue of this Agreement, nor shall either Party be an agent, representative, trustee or fiduciary of the other, except that Seller shall act on behalf of Buyer in remarketing Commodities pursuant to Exhibit C. Neither Party shall have any authority to bind the other to any agreement. This Agreement is intended to secure and provide for the services of each Party as an independent contractor.

Section 19.10 Immunity. Buyer represents and covenants to and agrees with Seller that it is not entitled to claim immunity on the grounds of sovereignty or other similar grounds with respect to itself from (i) suit or (ii) jurisdiction of any court because of its status as a political subdivision of the State of California; *provided* that the foregoing relates only to contractual claims and not to any claim based in tort.

Section 19.11 Rates and Indices.

(a) Daily Gas Reference Prices.

(i) Price Replacement Process for Gas, Fewer than Six Consecutive Gas Days. If a Daily Commodity Reference Price for Gas is not available for any Gas Day for any reason, then such Daily Commodity Reference Price for such Gas Day shall be the average of the following: (A) the applicable Daily Commodity Reference Price for the first Gas Day for which a price has been published that immediately precedes the relevant Gas Day; and (B) the applicable Daily Commodity Reference Price for the first Gas Day for which a Daily Commodity Reference Price is published that immediately follows the relevant Gas Day; *provided* that any unavailability of a Daily Commodity Reference Price lasting for six (6) or more consecutive Gas Days or arising from a permanent cessation of publication of such Daily Commodity Reference Price shall be resolved in accordance with clause (ii) or clause (iii) of this Section 19.11(a), respectively.

(ii) Price Replacement Process, Electricity or Six or More Consecutive Gas Days. If a Daily Commodity Reference Price for Electricity is not available for any Hour or a Daily Commodity Reference Price for Gas is not available for six (6) consecutive Gas Days but, either case, such Daily Commodity Reference Price has not permanently

ceased to be published, then the Parties shall promptly endeavor to agree on an alternative source for determination of such Daily Commodity Reference Price for the applicable Gas Days or Hours. If such agreement is not reached by the Parties within three (3) Business Days, the Parties shall request quotations for the applicable Daily Commodity Reference Price from four (4) recognized dealers in the applicable Commodity (two (2) selected by each Party) for the period that such Daily Commodity Reference Price is expected to be unavailable. If four (4) quotations are provided as requested, the applicable Daily Commodity Reference Price for the applicable Gas Days or Hours shall be the arithmetic mean of the quotations provided by each recognized dealer after disregarding the quotations having the highest and lowest values; *provided* that, if more than one (1) quotation has the same value, then one (1) of such quotations shall be disregarded. If exactly three (3) quotations are provided, the applicable Daily Commodity Reference Price for the applicable Gas Days or Hours shall be the quotation provided by the relevant dealer that remains after disregarding the quotations having the highest and lowest values; *provided* that, if more than one (1) quotation has the same value, then the value of the two (2) quotations with the same value shall control. If fewer than three (3) quotations are provided, the Parties shall seek additional quotations until at least three (3) have been received.

(iii) Price Replacement Process for Non-Published Index. If a Daily Commodity Reference Price is not available because it has permanently ceased to be published, then the Parties shall promptly endeavor to agree on an alternative source for determination of such Daily Commodity Reference Price, which may include agreeing upon a published index or a basket of published indices (“Daily Replacement Index”) from which to seek quotes for basis differentials as the replacement for the applicable Daily Commodity Reference Price. If such agreement is not reached by the Parties within three (3) Business Days, then the Daily Replacement Index shall be selected by Seller, acting reasonably. The Parties shall request quotations from four (4) recognized dealers in the applicable Commodity (two (2) selected by each Party) for a basis differential (“Daily Basis Differential”) between the Daily Replacement Index and physical prices at the relevant Delivery Point for the remaining term of this Agreement. If four (4) quotations are provided as requested, the Daily Basis Differential will be the arithmetic mean of the quotations provided by each recognized dealer, after disregarding the quotations having the highest and lowest values; *provided* that, if more than one (1) quotation has the same value, then one (1) of such quotations shall be disregarded. If exactly three (3) quotations are provided, the Daily Basis Differential shall be the quotation provided by the relevant dealer that remains after disregarding the quotations having the highest and lowest values; *provided* that, if more than one (1) quotation has the same value, then the value of the two (2) quotations with the same value shall control. If fewer than three (3) quotations are provided, the Parties shall seek additional quotations until at least three (3) have been received. The applicable Daily Commodity Reference Price shall be the Daily Replacement Index plus the Daily Basis Differential calculated in accordance with the provisions of this clause (iii).

(b) Monthly Index Prices.

(i) Price Replacement Process. If a Monthly Index Price is not available for any Gas Day for any reason (but such Monthly Index Price has not permanently ceased to be published), then the Parties shall promptly endeavor to negotiate in good faith to select a suitable substitute price. If such agreement is not reached by the Parties within three (3) Business Days, the Parties shall request quotations from four (4) recognized dealers in Gas (two (2) selected by each Party). If four (4) quotations are provided as requested, the applicable Monthly Index Price for that Gas Day shall be the arithmetic mean of the quotations provided by each recognized dealer after disregarding the quotations having the highest and lowest values; *provided* that, if more than one (1) quotation has the same value, then one (1) of such quotations shall be disregarded. If exactly three (3) quotations are provided, the applicable Monthly Index Price for that Gas Day shall be the quotation provided by the relevant dealer that remains after disregarding the quotations having the highest and lowest values; *provided* that, if more than one (1) quotation has the same value, then the value of the two (2) quotations with the same value shall control. If fewer than three (3) quotations are provided, the Parties shall seek additional quotations until at least three (3) have been received.

(ii) Price Replacement Process for Non-Published Index. If a Monthly Index Price is not available because it has permanently ceased to be published, then the Parties shall promptly endeavor to agree on an alternative source for determination of such Monthly Index Price, which may include agreeing upon a published index or a basket of published indices ("Monthly Replacement Index") from which to seek quotes for basis differentials as the replacement for the applicable Monthly Index Price. If such agreement is not reached by the Parties within three (3) Business Days, then the Monthly Replacement Index shall be selected by Seller, acting reasonably. The Parties shall request quotations from four (4) recognized dealers in Gas (two (2) selected by each Party) for a basis differential ("Monthly Basis Differential") between the Monthly Replacement Index and physical prices at the relevant Delivery Point for the remaining term of this Agreement. If four (4) quotations are provided as requested, the Monthly Basis Differential shall be the arithmetic mean of the quotations provided by each recognized dealer after disregarding the quotations having the highest and lowest values; *provided* that, if more than one (1) quotation has the same value, then one (1) of such quotations shall be disregarded. If exactly three (3) quotations are provided, the Monthly Basis Differential shall be the quotation provided by the relevant dealer that remains after disregarding the quotations having the highest and lowest values; *provided* that, if more than one (1) quotation has the same value, then the value of the two (2) quotations with the same value shall control. If fewer than three (3) quotations are provided, the Parties shall seek additional quotations until at least three (3) have been received. The applicable Monthly Index Price shall be the Monthly Replacement Index plus the Monthly Basis Differential calculated in accordance with the provisions of this clause (ii).

(c) Corrections. If a value published for any rate or index used or to be used in this Agreement is subsequently corrected and the correction is published or announced by the Person responsible for that publication or announcement within thirty (30) days after the original publication or announcement, either Party may notify the other Party of (i) that correction and (ii) the amount (if any) that is payable as a result of that correction. If, not later than thirty (30) days after publication or announcement of that correction, a Party gives notice that an amount is

so payable, the Party that originally either received or retained such amount shall, not later than three (3) Business Days after the effectiveness of that notice, pay, subject to any other applicable provisions of this Agreement, to the other Party that amount, together with interest on that amount at the Default Rate for the period from and including the day on which a payment originally was (or was not) made to but excluding the day of payment of the refund or payment resulting from that correction.

Section 19.12 Limitation of Liability. Notwithstanding anything to the contrary herein, all obligations of Buyer under this Agreement, including without limitation all obligations to make payments of any kind whatsoever, are special, limited obligations of Buyer, payable solely from the Trust Estate (as such term is defined in the Bond Indenture) as and to the extent provided in the Bond Indenture, including with respect to Operating Expenses (as such term is defined in the Bond Indenture). Buyer shall not be required to advance any moneys derived from any source other than the Revenues (as such term is defined in the Bond Indenture) and other assets pledged under the Bond Indenture for any of the purposes in this Agreement mentioned. Neither the faith and credit of Buyer nor the taxing power of the State of California or any political subdivision thereof is pledged to payments pursuant to this Agreement. Buyer shall not be directly, indirectly, contingently or otherwise liable for any costs, expenses, losses, damages, claims or actions, of any conceivable kind on any conceivable theory, under or by reasons of or in connection with this Agreement, except solely to the extent Revenues (as such term is defined in the Bond Indenture) are received for the payment thereof and may be applied therefor pursuant to the terms of the Bond Indenture.

Section 19.13 Counterparts. This Agreement may be executed and acknowledged in multiple counterparts and by the Parties in separate counterparts, each of which shall be an original and all of which shall be and constitute one and the same instrument.

Section 19.14 Modification of and Compliance with Bond Indenture. Buyer agrees and covenants that, as long as this Agreement is in effect, it shall not amend or consent to the amendment of any provision of the Bond Indenture (including without limitation Article V of the Bond Indenture), or fail to comply with any covenant applying to Buyer thereunder, that would, in any such case, be reasonably likely to have a material adverse impact on Seller, J. Aron, the effectiveness of this Agreement or the transactions contemplated by this Agreement without the prior written consent of Seller, such consent not to be unreasonably withheld.

Section 19.15 Rights of Trustee. Pursuant to the terms of the Bond Indenture, Buyer has irrevocably appointed the Trustee as its agent to issue notices (including Remarketing Notices) and as directed under the Bond Indenture, to take any other actions that Buyer is required or permitted to take under this Agreement. Seller may rely on notices or other actions taken by Buyer or the Trustee and Seller has the right to exclusively rely on any notices delivered by the Trustee, regardless of any conflicting notices that it may receive from Buyer.

Section 19.16 Waiver of Defenses. Seller waives all rights to set-off, counterclaim, recoupment and any other defenses that might otherwise be available to Seller with regard to Seller's obligations pursuant to the terms of this Agreement.

Section 19.17 Rate Changes.

(a) Absent the agreement of the Parties to the proposed change, the standard of review for changes to any rate, charge, classification, term or condition of this Agreement, whether proposed by a Party (to the extent that any waiver in Section 19.17(b) below is unenforceable or ineffective as to such Party), a non-party or FERC acting *sua sponte*, shall solely be the “public interest” application of the “just and reasonable” standard of review set forth in United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332 (1956) and Federal Power Commission v. Sierra Pacific Power Co., 350 U.S. 348 (1956) and clarified by Morgan Stanley Capital Group Inc. v. Public Util. Dist. No. 1 of Snohomish, 554 U.S. 527 (2008).

(b) In addition, and notwithstanding Section 19.17(a), to the fullest extent permitted by applicable Law, each Party, for itself and its successors and assigns, hereby expressly and irrevocably waives any rights it can or may have, now or in the future, whether under Section 205 and/or 206 of the Federal Power Act or otherwise, to seek to obtain from FERC by any means, directly or indirectly (through complaint, investigation or otherwise), and each hereby covenants and agrees not at any time to seek to so obtain, an order from FERC changing any section of this Agreement specifying the rate, charge, classification, or other term or condition agreed to by the Parties, it being the express intent of the Parties that, to the fullest extent permitted by applicable Law, neither Party shall unilaterally seek to obtain from FERC any relief changing the rate, charge, classification, or other term or condition of this Agreement, notwithstanding any subsequent changes in applicable Law or market conditions that may occur. In the event it were to be determined that applicable Law precludes the Parties from waiving their rights to seek changes from FERC to their market-based power sales contracts (including entering into covenants not to do so) then this Section 19.17(b) shall not apply, *provided* that, consistent with Section 19.17(a), neither Party shall seek any such changes except solely under the “public interest” application of the “just and reasonable” standard of review and otherwise as set forth in Section 19.17(a).

Section 19.18 U.S. Resolution Stay Provisions. Seller and Buyer hereby confirm that they are adherents to the ISDA 2018 U.S. Resolution Stay Protocol (“ISDA U.S. Stay Protocol”), the terms of the ISDA U.S. Stay Protocol are incorporated into and form a part of this Agreement, and for the purposes of such incorporation, (i) Seller shall be deemed to be a Regulated Entity, (ii) Buyer shall be deemed to be an Adhering Party, and (iii) this Agreement shall be deemed a Protocol Covered Agreement. In the event of any inconsistencies between this Agreement and the ISDA U.S. Stay Protocol, the ISDA U.S. Stay Protocol will prevail.⁷

IN WITNESS WHEREOF, the Parties have caused this Prepaid Commodity Sales Agreement to be duly executed and delivered by their respective officers thereunto duly authorized as of the date first above written.

[Separate Signature Page(s) Attached]

⁷ OHS NTD: Parties to confirm that they have adhered to the ISDA U.S. Stay Protocol. If not, we can provide alternative language.

ARON ENERGY PREPAY 33 LLC

By: _____
Name: _____
Title: _____

NORTHERN CALIFORNIA ENERGY AUTHORITY

By: _____
Name: _____
Title: _____

EXHIBIT A
DELIVERY POINTS; CONTRACT QUANTITIES

[To be attached.]

EXHIBIT B

NOTICES

IF TO SELLER: Aron Energy Prepay 33 LLC
c/o J. Aron & Company LLC
609 Main Street, Suite 2100
Houston, Texas 77002
Email: gs-prepay-notices@gs.com

Trading: Kenan Arkan
Telephone: (212) 357-2542
gs-prepay-notices@gs.com

Scheduling: Email: ficc-jaron-natgasops@ny.email.gs.com
Direct Phone: 212.902.8148
Fax: 212.493.9847

Carly Norlander
ICE Chat: cnorlander1
Email: ficc-jaron-natgasops@ny.email.gs.com
Direct Phone: 403.233.9299
Fax: 212.493.9847

Payments/Invoicing: Lindsey McNally
Telephone: (212) 855-0880
ficc-struct-sett@gs.com

General Notices: Andres E. Aguila
Telephone: (212) 855-6008
Fax: (212) 291-2124
andres.aguila@gs.com

IF TO BUYER: Northern California Energy Authority
c/o Sacramento Municipal Utility District
Attention: Power Contracts Administration
6301 S Street
Sacramento, CA 95817-1899

Gas Related: Gas Trading
916-732-7140
GasTrading@smud.org

Power Related: Day Ahead Trading
916-732-5669
DayAheadTrading@smud.org

Invoicing/Payments: Energy Settlements
916-732-6751
EnergySettlements@smud.org

EXHIBIT C

COMMODITY REMARKETING

Section 1. Defined Terms. Capitalized terms used but not otherwise defined in this Exhibit shall have the meanings given to such terms in the Agreement, unless otherwise indicated. The following terms, when used in this Exhibit C and identified by the capitalization of the first letter thereof, have the respective meanings set forth below, unless the context otherwise requires:

“Code” means the Internal Revenue Code of 1986, as amended.

“Commodity Remarketing Reserve Fund” means an account established under the Bond Indenture into which Buyer shall deposit the amounts specified in Section 5(e) of this Exhibit C.

“Contract Specified Price” has the meaning specified in Exhibit A for each Delivery Point, which Contract Specified Price shall be (x) the Monthly Index Price for each Gas Delivery Point unless the Project Participant assigns a fixed price Upstream Supply Contract consistent with the terms of and as defined in Exhibit G-1 and (y) the Day-Ahead Market Price for each Electricity Delivery Point unless the Project Participant assigns a power purchase agreement consistent with Exhibit H to the Commodity Supply Contract.

“Daily Remarketing Notice” has the meaning specified in Section 3(c) of this Exhibit C.

“Deemed Remarketing Notice” has the meaning specified in Section 3(d) of this Exhibit C.

“Expired Non-Private Business Sales Ledger” has the meaning specified in Section 9(a) of this Exhibit C.

“Expired Private Business Sales Ledger” has the meaning specified in Section 9(a) of this Exhibit C.

“Initial Remarketing” has the meaning specified in Section 5 of this Exhibit C.

“Ledger Entry” has the meaning specified in Section 7(d) of this Exhibit C.

“Ledger Event” has the meaning specified in Section 9(c) of this Exhibit C.

“Minimum Remarketing Sales Price” is an amount determined for Gas or Electricity (as applicable) by the following formula:

$$\text{MRSP} = \text{RRPP} - (\text{RRPP} \times (\text{RRF}/\text{CLB}))$$

Where:

MRSP = The Minimum Remarketing Sales Price for one MMBtu of Gas or one MWh of Electricity

RRPP = The Remediation Remarketing Purchase Price for one MMBtu of Gas or one MWh of Electricity

RRF = The balance of the Commodity Remarketing Reserve Fund

CLB = The combined cash balance of the Non-Private Business Sales Ledger and the Private Business Sales Ledger

“Monthly Discount Percentage” has the meaning specified in the Commodity Supply Contract.

“Monthly Remarketing Notice” has the meaning specified in Section 3(b) of this Exhibit C.

“Municipal Utility” means any Person that (i) is a “governmental person” as defined in Treasury Regulation Section 1.141-1(b), and (ii) owns either or both a Gas distribution utility or an electric distribution utility (or provides Gas or Electricity at wholesale to entities described in clause (i) that own such utilities). Buyer may from time to time revise the definition of “Municipal Utility” to conform to the applicable provisions of the Code or Treasury Regulations by delivery of written notice to Seller setting forth the revised definition together with a Tax Opinion.

“Net Participant Price” means the Contract Price (as defined in the Commodity Supply Contract).

“Non-Private Business Remarketing Proceeds” means all proceeds received by Buyer under Section 5(c) of this Exhibit C from Seller’s remarketing of Commodities in any Non-Private Business Sale.

“Non-Private Business Sale” means a sale (other than a Qualified Sale) of Commodities to a “governmental person” as defined in Treasury Regulation Section 1.141-1(b) that in each case agrees in writing to not use any part of such Commodities for a Private Business Use.

“Non-Private Business Sales Ledger” has the meaning specified in Section 7(a) of this Exhibit C.

“Non-Qualifying Remarketing Limit” means (a) during the Gas Delivery Period, a quantity of Gas, in MMBtu, equal to 10% of the total quantity of Gas, in MMBtu, to be delivered hereunder (calculated assuming the Switch Date never occurs), and (b) during the Electricity Delivery Period, a quantity of Electricity, in MWh, equal to 10% of the total quantity of Electricity, in MWh, to be delivered hereunder (calculated assuming the Switch Date occurs on the first day of the Delivery Period), in each case as such Non-Qualifying Remarketing Limit may be increased from time to time upon receipt by Buyer and Seller of a Tax Opinion setting forth a higher Non-Qualifying Remarketing Limit.

“Private Business Remarketing Limit” means (a) during the Gas Delivery Period, a quantity of Gas, in MMBtu, equal to (i) \$15,000,000, divided by (ii) the Specified Fixed Price, and (b) during the Electricity Delivery Period, a quantity of Electricity equal to (i) \$15,000,000, divided by (ii) the Specified Fixed Price, in each case as such Private Business Remarketing Limit may be increased from time to time upon receipt by Buyer and Seller of a Tax Opinion setting forth a higher Private Business Remarketing Limit.

“Private Business Remarketing Proceeds” means all proceeds received by Buyer under Section 5(d) of this Exhibit C from Seller’s remarketing of Commodities in any Private Business Sale (including the purchase of such Commodities by Seller for its own account).

“Private Business Sale” means any sale of Commodities other than in a Non-Private Business Sale or a Qualified Sale.

“Private Business Sales Ledger” has the meaning specified in Section 7(b) of this Exhibit C.

“Private Business Use” has the meaning ascribed to such term in Section 141 of the Code.

“Qualified Sale” means the sale of Commodities to a Municipal Utility that agrees in writing (i) to use all of such Commodities for a Qualifying Use that is not a Private Business Use and (ii) not to count any purchase of such Commodities towards any remediation obligations such Municipal Utility may have with respect to proceeds received from the sale of property purchased with tax-exempt financing proceeds.

“Qualifying Use” with respect to Commodities has the meaning ascribed to such term in Treasury Regulations Section 1.148-1(e)(2)(iii)(A)(2) or (B)(2), as applicable.

“Remarketing Fee” means the amount specified in Exhibit F.

“Remarketing Notice” means either a Daily Remarketing Notice or a Monthly Remarketing Notice but shall not include a Deemed Remarketing Notice.

“Remediation Remarketing” means the remarketing of Commodities in Qualified Sales by Seller pursuant to Section 8 of this Exhibit C in an effort to reduce to zero (0) any Ledger Entry balances in either the Non-Private Business Sales Ledger or the Private Business Sales Ledger.

“Remediation Remarketing Purchase Price” has the meaning specified in Section 8(c)(ii) of this Exhibit C.

“Tax Opinion” means an Opinion of Special Tax Counsel (as defined in the Bond Indenture) to the effect that an action proposed to be taken will not, in and of itself, cause interest on the applicable Bonds to be included in gross income for purposes of federal income taxation .

“Treasury Regulations” means the U.S. Treasury Regulations under the Code.

“Unit” means (a) with respect to Gas, an MMBtu, and (b) with respect to Electricity, a MWh.

Section 2. Buyer’s Right and Obligation to Request Remarketing. Buyer may, and, if required to do so under the Bond Indenture or Article VII of the Agreement shall, request Seller to remarket, pursuant to this Exhibit C, all or a specified part of the Contract Quantities for any Delivery Point.

Section 3. Remarketing Notice.

(a) Generally. To request remarketing under this Exhibit C, Buyer must issue a Remarketing Notice substantially in the form attached to Exhibit G to the Agreement, which Remarketing Notice must state (i) the portion of the Contract Quantity to be remarketed from each relevant Delivery Point, and (ii) either (A) during the Gas Delivery Period, the Gas Day or Gas Days in which such portion of the Contract Quantity is to be remarketed, or (B) during the Electricity Delivery Period, the Delivery Hours in which such portion of the Contract Quantity is to be remarketed.

(b) Monthly Remarketing Notice. During the Electricity Delivery Period, Buyer may designate a Remarketing Notice as a “Monthly Remarketing Notice” if the Remarketing Notice is delivered to Seller not later than three (3) Business Days prior to the start of the first Month in which it applies and applies to a period of one (1) Month or more. During the Gas Delivery Period, Buyer may designate a Remarketing Notice as a “Monthly Remarketing Notice” if the Remarketing Notice:

- (i) applies to one (1) or more full Months;
- (ii) specifies an equal quantity of Gas to be remarketed from each relevant Delivery Point on each Gas Day in each relevant Month; and
- (iii) either (A) is delivered to Seller not later than three (3) Business Days prior to the last day of exchange trading for Henry Hub Natural Gas Futures Contracts on the New York Mercantile Exchange (or any successor thereto) for deliveries in the first Month to which such Remarketing Notice applies or (B) with respect to any Month for which Buyer is suspending or terminating Gas deliveries to Project Participant in accordance with the provisions of the Commodity Supply Contract, is delivered to Seller not later than three (3) Business Days prior to the first Month to which such Remarketing Notice applies.

(c) Daily Remarketing Notice. During the Electricity Delivery Period, Buyer may designate a Remarketing Notice as a “Daily Remarketing Notice” if the Remarketing Notice is delivered to Seller not later than three (3) Business Days prior to the Business Day in which it applies. During the Gas Delivery Period, Buyer may designate a Remarketing Notice as a “Daily Remarketing Notice” if the Remarketing Notice:

- (i) is delivered to Seller not later than 8:30 am CPT two (2) Business Days prior to nominations leaving control of the nominating Party for the first timely nomination cycle for the Transporter for the Gas Day and at the Delivery Point where such Gas was originally intended to be delivered; *provided*, however, if a Transporter modifies its nomination process, Seller may propose to modify the preceding deadline, subject to Buyer’s consent, which consent shall not be unreasonably withheld; and
- (ii) specifies an equal quantity of Gas to be remarketed on Gas Days covering a weekend or any other set of Gas Days that is generally scheduled as a block in the Gas industry. For the avoidance of doubt, Buyer may only issue a single Remarketing Notice for any such set of Gas Days covering the weekend or other relevant block of Gas Days.

(d) Deemed Remarketing Notice. Any other notice to remarket Commodities given by Buyer (or deemed to be given by Buyer pursuant to Section 4.2 of the Agreement) will be a “Deemed Remarketing Notice.”

Section 4. Seller’s Remarketing Obligations Generally.

(a) All Commodities remarketed by Seller pursuant to this Exhibit C shall be for the benefit of Buyer, meaning all remarketed Commodities shall first be sold by Seller to Buyer and then resold by or for the account of Buyer pursuant to the terms and provisions of this Exhibit C.

(b) Seller may act directly as principal to the remarketing buyer or may cause a supplier to Seller to act directly as principal to the remarketing buyer. Neither Seller nor any Person acting on Seller’s behalf shall owe any fiduciary duties to Buyer with respect to the remarketing of any Commodities. Buyer acknowledges and agrees that Seller or a Person acting on Seller’s behalf in remarketing Commodities may have other supplies of Commodities available to sell to potential remarketing buyers, and Commodities designated for remarketing shall not be entitled to any preference over any such other supplies of Commodities.

(c) Seller shall prepare, maintain and provide Monthly to Buyer accurate and complete records showing (i) the identity of each purchaser in a Qualified Sale, a Non-Private Business Sale, or a Private Business Sale undertaken by Seller on Buyer’s behalf, (ii) the aggregate amount of Commodities remarketed under this Agreement in Qualified Sales, (iii) the aggregate amount of Commodities remarketed under this Agreement in Non-Private Business Sales, and (iv) the aggregate amount of Commodities remarketed under this Agreement in Private Business Sales.

(d) Any amounts due to Buyer for Commodities remarketed by Seller or purchased by Seller under this Exhibit C shall be remitted to Buyer pursuant to Section 14.2 of the Agreement in the Month following the Month in which such Commodities is remarketed or purchased, as applicable.

Section 5. Initial Remarketing. The following provisions shall apply to the initial remarketing of any Commodities to be remarketed by Seller pursuant to a Remarketing Notice (an “Initial Remarketing”):

(a) Seller shall use Commercially Reasonable Efforts to remarket or cause to be remarketed all Commodities specified for Initial Remarketing. In exercising such Commercially Reasonable Efforts, Seller shall first attempt to remarket or cause to be remarketed all Commodities specified in a Remarketing Notice in Qualified Sales and then, if Seller is unable to so remarket all of such Commodities for such purposes, in Non-Private Business Sales. If Seller is unable to remarket all or any portion of the Commodities designated in a Remarketing Notice, then Seller shall purchase such Commodities for its own account at the prices set forth in Section 5(d) of this Exhibit C as if such Commodities had been remarketed to it.

(b) Seller shall not be required to remarket any Commodities in an Initial Remarketing at a net price to Seller (after deducting all transportation costs and all other costs) that is anticipated to be less than:

(i) During the Gas Delivery Period, (A) the Monthly Index Price applicable to such Gas in the case of an Initial Remarketing pursuant to a Monthly Remarketing Notice, or (B) the Index Price (Low) applicable to such Gas in the case of an Initial Remarketing pursuant to a Daily Remarketing Notice.

(ii) During the Electricity Delivery Period, (A) the Day-Ahead Market Price applicable to such Electricity in the case of an Initial Remarketing pursuant to a Monthly Remarketing Notice, or (B) the Real-Time Market Price applicable to such Electricity in the case of an Initial Remarketing pursuant to a Daily Remarketing Notice.

(c) Proceeds from Qualified Sales and Non-Private Business Sales.

(i) For any Commodities specified in a Monthly Remarketing Notice that Seller remarkets in a Qualified Sale or Non-Private Business Sale, Seller shall deliver to Buyer the actual proceeds less the Remarketing Fee per Unit sold, *provided* that the aggregate amount delivered by Seller under this clause (i) for any Month shall not be less than the aggregate quantity so remarketed during such Month multiplied by the Net Participant Price.

(ii) For any Commodities specified in a Daily Remarketing Notice that Seller remarkets in a Qualified Sale or Non-Private Business Sale, Seller shall deliver to Buyer the actual proceeds received with respect to such Commodities less the Remarketing Fee per Unit sold *provided* that the aggregate amount delivered by Seller under this clause (ii) for any such Commodities shall not be less than the aggregate amount that would have been paid to Buyer under Section 5(d)(ii) of this Exhibit C (with respect to Commodities specified in a Daily Remarketing Notice) or Section 6 (with respect to Deemed Remarketing), in each case less the product of Monthly Discount per Unit.

(iii) In the event the payment due date under a Qualified Sale or Non-Private Business Sale has not yet occurred prior to the date upon which payment is due under this Agreement for the applicable Month, the Parties shall nonetheless issue statements as if the full amount from such Qualified Sale or Non-Private Business Sale had been paid and, if such full payment is not received prior to the next Monthly due date under this Agreement, the Parties shall issue the appropriate statements to reflect the actual proceeds received and true-up any difference.

(d) Proceeds from Private Business Sales.

(i) For any Commodities specified in a Monthly Remarketing Notice that are not remarketed in a Qualified Sale or Non-Private Business Sale, Seller shall pay to Buyer the positive result determined by the following formula with respect to each Delivery Point to which such Monthly Remarketing Notice applied:

$$P = Q \times (IP - RF)$$

Where:

$$P = \text{The amount payable by Seller under this } \underline{\text{Section 5(d)(i)}}$$

- Q = The quantity of such Commodities remarketed with respect to such Delivery Point
- IP = Either (A) during the Gas Delivery Period, the Monthly Index Price for such Delivery Point, or (B) during the Electricity Delivery Period, the Day-Ahead Market Price for such Delivery Point.
- RF = The Remarketing Fee

(ii) For any Commodities specified in a Daily Remarketing Notice that are not remarketed in a Qualified Sale or Non-Private Business Sale, Seller shall pay to Buyer the positive result determined by the following formula with respect to each Delivery Point to which such Daily Remarketing Notice applied:

$$P = Q \times (IPL - RF)$$

Where:

- P = The amount payable by Seller under this Section 5(d)(ii)
- Q = The quantity of such Commodities remarketed with respect to such Delivery Point
- IPL = Either (A) during the Gas Delivery Period, the Index Price (Low) for such Delivery Point for the Delivery Point, or (B) during the Electricity Delivery Period, the Real-Time Market Price for such Delivery Point
- RF = The Remarketing Fee

(e) Any proceeds received by Buyer under this Section 5 for Commodities remarketed in sales other than Qualified Sales that exceed the amount Buyer would have received for the same quantity of Commodities at the Net Participant Price shall be deposited in the Commodity Remarketing Reserve Fund.

Section 6. Deemed Remarketing. For any Commodities specified or deemed to be specified in a Deemed Remarketing Notice, Seller shall pay to Buyer the positive result determined by the following formula with respect to each Delivery Point to which such Deemed Remarketing Notice applied:

$$P = Q \times (IPL - RF - AF)$$

Where:

- P = The amount payable by Seller under this Section 6
- Q = The quantity of such Commodities remarketed with respect to such Delivery Point
- IPL = Either:

(A) during the Gas Delivery Period, the lower of (x) the Index Price (Low) for the Gas Day following the Gas Day to which such Deemed Remarketing Notice applies, and (y) the Monthly Index Price for the applicable Month in which such Deemed Remarketing Notice applies, or

(B) during the Electricity Delivery Period, the price at which Seller, acting in a Commercially Reasonable manner, resells at the Delivery Point any Electricity not received by Buyer, deducting from such proceeds any (i) costs reasonably incurred by Seller in reselling such Electricity and (ii) additional transmission charges, if any, reasonably incurred by Seller in delivering such Electricity to the third party purchasers, or at Seller's option, the market price at the Delivery Point for such Electricity not received as determined by Seller in a Commercially Reasonable manner; *provided*, however, in no event shall such price include any penalties, ratcheted demand or similar charges, nor shall Seller be required to utilize or change its utilization of its owned or controlled assets, including contractual assets, or market positions to minimize Buyer's liability. For purposes of the foregoing, Seller shall be considered to have resold such Electricity to the extent Seller shall have entered into one or more arrangements in a Commercially Reasonable manner whereby Seller repurchases its obligation to purchase and receive Electricity from another party at the Delivery Point

RF = The Remarketing Fee

AF = The Administrative Fee, *provided* that the Administrative Fee shall not apply during the Electricity Delivery Period unless such Deemed Remarketing Notice results from Buyer's failure to Schedule pursuant to Section 4.2 of the Agreement

Section 7. Tracking Remarketing Proceeds. Seller shall maintain four (4) separate ledgers related to remarketing proceeds as described below:

(a) One (1) ledger (the "Non-Private Business Sales Ledger") shall include, (A) as dollar credits, the Non-Private Business Remarketing Proceeds, and (B) as a Unit credit, the Units of Commodities corresponding to such Non-Private Business Remarketing Proceeds.

(b) Another ledger (the "Private Business Sales Ledger") shall include, (A) as dollar credits, Private Business Remarketing Proceeds, and (B) as a Unit credit, the Units of Commodities corresponding to such Private Business Remarketing Proceeds.

(c) The other two (2) ledgers shall be maintained as described in Section 9(a) of this Exhibit C.

(d) The credits to be recorded in the ledgers described in Section 7(a) and (b) of this Exhibit C (collectively, the "Ledger Entries") shall be dated as of the first day of the Month prior to the Month in which Buyer or Project Participant receives the proceeds corresponding to such Ledger Entries.

(e) The four (4) ledgers described in Section 7 of this Exhibit C and all debits and credits to such ledgers shall be kept on an aggregate basis for purposes of this Exhibit C.

(f) Buyer shall provide to Seller all reports provided by a Project Participant pursuant to Section 7.5 of the applicable Commodity Supply Contract. To the extent set forth in Section 7.6(a) of the applicable Commodity Supply Contract, Seller will add “Disqualified Sale Proceeds” to the appropriate ledgers described above.

Section 8. Remediation Remarketing and Bond Redemptions.

(a) At any time that the net Ledger Entry balance of either the Non-Private Business Sales Ledger or the Private Business Sales Ledger is greater than zero (0):

(b) Buyer shall exercise Commercially Reasonable Efforts to utilize the proceeds represented by the dollar balances of such Ledger Entries to purchase Commodities for resale in Qualified Sales and shall promptly notify Seller following such purchase and sale.

(c) Seller shall exercise Commercially Reasonable Efforts to locate opportunities for Buyer to purchase Commodities to sell in Qualified Sales to remediate the proceeds represented by the dollar balances of the Ledger Entries. In this regard, if Seller locates a Remediation Remarketing opportunity, then

(i) Seller shall notify Buyer of such opportunity;

(ii) Buyer shall, upon receipt of such notice, purchase Commodities from Seller at a price determined by Seller in a Commercially Reasonable manner based upon applicable market prices at the location where the remarketing opportunity sale will occur (the “Remediation Remarketing Purchase Price”);

(iii) Seller shall remarket such Commodities on Buyer’s behalf in a Qualified Sale;

(iv) Seller shall remit to Buyer the proceeds collected from such Qualified Sale, but in no event shall Seller remit less than the Minimum Remarketing Sales Price for the remarketing transaction; *provided*, however, that to the extent Seller does not receive the Remediation Remarketing Purchase Price from Buyer prior to the Remediation Remarketing described herein, Seller shall credit the proceeds collected from such remarketing sale against the Remediation Remarketing Purchase Price owed to Seller, and Seller shall be reimbursed from the Commodity Remarketing Reserve Fund to the extent necessary to make Seller whole for such Qualified Sale; and

(v) Seller shall issue to Buyer a confirmation notice (including the dollar price and Units) of each purchase of Commodities by or on behalf of Buyer, and each sale of Commodities on Buyer’s behalf, under this Section 8, and amounts due from or to Buyer shall be separately stated on the Billing Statement for the Month in which such remarketing transactions occur.

For the avoidance of doubt, Seller shall not sell, nor be required to sell, Commodities to Buyer for a Remediation Remarketing if such Commodities are to be remarketed by Seller on behalf of Buyer for less than the Minimum Remarketing Sales Price.

(d) Unless the terms of a Remediation Remarketing undertaken by Seller on Buyer's behalf are specifically assumed by Buyer, Seller shall indemnify Buyer for any costs or liabilities associated with such Remediation Remarketing (other than costs related to the price at which such Commodities are sold and the risk of collecting the sale proceeds from the remarketing buyer), including, without limitation, any cover or replacement costs; termination payments; fees, penalties, costs or charges (in cash or in kind) assessed by any Transporter for failure to satisfy its balance or nomination requirements; Claims for breach of warranty; taxes, fees, levies, penalties, licenses or charges imposed by any Government Agency; and Claims from personal injury or property damages.

(e) The total purchase price of any Commodities purchased by Buyer or Seller pursuant to Section 8(c) of this Exhibit C will be entered by Seller as a dollar debit on (i) first, the Private Business Sales Ledger, if and to the extent such ledger has a positive balance and such Commodities are remarketed in a Qualified Sale and (ii) second, on the Non-Private Business Sales Ledger, if and to the extent such ledger has a positive balance, the Private Business Sales Ledger has a zero (0) balance, and such Commodities are remarketed in a Qualified Sale, with such debit in the case of (i) or (ii) dated as of the last day of the Month in which such Commodities were purchased. Each dollar debit shall offset and reverse an equal amount of the dollar credits to such ledger (that have not previously been transferred to the Expired Non-Private Business Sales Ledger or the Expired Private Business Sales Ledger) in the order in which they were made (beginning with the oldest credit not previously offset and reversed by any prior debit). Whenever a debit is made to the dollar balance of the Ledger Entries of either such ledger, Seller shall also debit the Commodities balance of the Ledger Entries of such ledger based on (i) such dollar debit divided by (ii) an average Commodities price calculated from the net Ledger Entry then present on the relevant ledger being debited. For the avoidance of doubt, neither the Non-Private Business Sales Ledger nor the Private Business Sales Ledger shall ever have a negative balance, and the same purchase transaction shall not result in a debit to more than one ledger except to the extent that a debit for the transaction causes one (1) ledger to have a zero (0) balance and the remaining portion of the permitted debit is made to the other ledger.

(f) In addition to the ability of Seller or Buyer to engage in Remediation Remarketing to reduce the balances of any Ledger Entries through Qualified Sales of the Commodity (either Gas or Electricity) that was originally remarketed the proceeds represented by the dollar balances of such Ledger Entries may also be remediated through the purchase of the other Commodity (either Electricity or Gas) that will be remarketed in Qualified Sales. If Seller locates an opportunity for Buyer to purchase the other Commodity for a Remediation Remarketing, the provisions of Section 8c) shall apply to such opportunity *provided* that the entry of Unit debits shall be made as follows:

(i) To the extent the Ledger Entries for Units consist of MMBtus, for any Remediation Remarketing of Electricity, a quantity of MMBtus will be debited based on (i) the total proceeds paid for such Electricity divided by (ii) an average Gas price

calculated from the net Ledger Entry balance then present on the relevant ledger being debited.

(ii) To the extent the Ledger Entries for Units consist of MWhs, for any Remediation Remarketing of Gas, a quantity of MWhs will be debited based on (i) the total proceeds paid for such Gas divided by (ii) an average Electricity price calculated from the net Ledger Entry balance then present on the relevant ledger being debited.

(g) In the event that (i) the Project Participant remediates the proceeds represented by the dollar balances of the Ledger Entries pursuant to Section 7.5 of the Commodity Supply Contract or (ii) Bonds are redeemed pursuant to the provisions of Section 7.6(c) of the Commodity Supply Contract and Section 4.01(b) of the Bond Indenture, the corresponding Ledger Entries then present on any ledger shall be debited.

(h) Upon the Switch Date, all Ledger Entries for Units consisting of MMBtus shall be converted to MWhs based on an average Gas price calculated from the net Ledger Entry balance then present on the relevant ledger being debited.

Section 9. Ledger Event.

(a) In addition to the Non-Private Business Sales Ledger and the Private Business Sales Ledger described in Section 7(a) and (b) of this Exhibit C, above, Seller shall also maintain an “Expired Non-Private Business Sales Ledger” and an “Expired Private Business Sales Ledger.” Whenever a credit to the dollar balance of the Ledger Entries of the Non-Private Business Sales Ledger has not been reversed in full within two (2) years of such credit by an offsetting dollar debit in accordance with Section 8(c) or (d) of this Exhibit C, then Seller shall (i) debit the remaining portion of such dollar credit and the Unit balance of the Ledger Entries in the manner described in the penultimate sentence of Section 8(c) and (ii) record such debits as credits to the Expired Non-Private Business Sales Ledger. Similarly, whenever a credit to the dollar balance of the Ledger Entries of the Private Business Sales Ledger has not been reversed in full within two (2) years of such credit by an offsetting dollar debit in accordance with Section 8(c) or (d) of this Exhibit C, then Seller shall (i) debit the remaining portion of such dollar credit and the Unit balance of the Ledger Entries in the manner described in the penultimate sentence of Section 8(c) and (ii) record such debits as credits to the Expired Private Business Sales Ledger. Pursuant to Section 19.3(b) of the Agreement, upon any partial redemption of Bonds in accordance with the Bond Indenture, the dollar credits made to either the Expired Non-Private Business Sales Ledger or the Expired Private Business Sales Ledger shall be reduced (in the order of entry) by an aggregate amount corresponding to the principal amount of Bonds so redeemed, and the Unit credits to such ledgers shall be reduced by the contemporaneous Unit credits corresponding to the dollar credits so reduced.

(b) No later than the tenth (10th) day of each Month, Seller shall provide to Buyer copies of the Non-Private Business Sales Ledger, the Private Business Sales Ledger, the Expired Non-Private Business Sales Ledger and the Expired Private Business Sales Ledger showing all credits and debits to each such ledger since the Execution Date, in each case if a credit has been recorded in such ledger since the Execution Date.

(c) A “Ledger Event” shall occur if, at any time, either (i) (A) the sum of all Btu credits on the Expired Non-Private Business Sales Ledger and the Expired Private Business Sales Ledger exceeds (B) the Non-Qualifying Remarketing Limit, or (ii) (A) the sum of all Btu credits on the Expired Private Business Sales Ledger exceeds (B) the Private Business Remarketing Limit.

(d) The occurrence of a Ledger Event and any remedies associated therewith in Article XVII of the Agreement shall be Buyer’s sole and exclusive remedies with respect to any inability by Seller to purchase and remarket Commodities for Buyer pursuant to, or any breach by Seller of its obligations under, this Exhibit C.

Section 10. Remarketing of Contract Quantities under Gas Assignment Agreement or PPA Assignment Agreement. Notwithstanding anything to the contrary herein but subject to the immediately following sentence of this Section 10, if (a) a quantity of Commodities less than (x) the Assigned Gas Quantity as defined in a Gas Assignment Agreement or (y) the Assigned Prepay Quantity as defined in a PPA Assignment Agreement is delivered or taken hereunder in any Month during an Assignment Period for any reason other than Force Majeure, then (i) Buyer will be deemed to have requested Seller to remarket the portion of the Contract Quantity not delivered (regardless of whether a Remarketing Notice was delivered) and (ii) Seller shall sell such Commodities or cause such Commodities to be sold in a Private Business Sale at the Contract Specified Price minus the applicable Remarketing Fee. Seller shall pay Buyer for any such Month the product of (I) the portion of the Contract Quantity not delivered, multiplied by (II) the Contract Specified Price minus the applicable Remarketing Fee, and all such sales shall constitute a Private Business Sale and shall be reflected on the Private Business Sales Ledger.

EXHIBIT D-1

TERMINATION PAYMENT SCHEDULE

Month of Early Termination Date	Early Termination Payment Date (If Not a Business Day, Preceding Business Day)	Termination Payment (\$)
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[To be attached.]

EXHIBIT D-2

TERMINATION PAYMENT ADJUSTMENT SCHEDULE

[To come for subsequent periods.]

EXHIBIT D-3

POST-TERMINATION PAYMENT SCHEDULE

[To be attached.]

EXHIBIT E
RECEIVABLES PURCHASE EXHIBIT

[To be attached.]

EXHIBIT E

RECEIVABLES PURCHASE EXHIBIT

ARTICLE I

DEFINITIONS

Section 1.1 Definitions. Capitalized terms used but not otherwise defined in this Receivables Purchase Exhibit (this “Exhibit”) shall have the meanings ascribed to such terms in the Agreement, unless otherwise indicated. The following terms, when used in this Exhibit and identified by the capitalization of the first letter thereof, have the respective meanings set forth below, unless the context otherwise requires.

“Average Daily Receivables Balance” has the meaning specified in Section 2.11.

“Bill of Sale” means a bill of sale in substantially the form attached to this Exhibit as Attachment 1 or Attachment 2 as the context requires.

“Elective Identified Receivables” has the meaning specified in **Error! Reference source not found.**

“Elective Receivable Option Notice” has the meaning specified in **Error! Reference source not found.**

“Elective Receivable” has the meaning specified in **Error! Reference source not found.**

“Elective Receivables Amount” has the meaning specified in **Error! Reference source not found.**

“Elective Receivables Offer” has the meaning specified in **Error! Reference source not found.**

“Encumbrance” means any lien, pledge, hypothecation, charge, security interest, conditional sale, right of refusal or any other adverse claim or interest having the practical effect of any of the foregoing.

“Identified Receivables” means Elective Identified Receivables or Swap Deficiency Identified Receivables, as applicable.

“Indemnified Person” has the meaning specified in Section 5.2(d).

“Indemnifying Person” has the meaning specified in Section 5.2(d).

“Issuer” means Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint

Exercise of Powers Act (Article 1, Chapter 5, Division 7, Title 1, Section 6500 et seq. of the California Government Code, as amended).

“Minimum Amount” has the meaning specified in the Bond Indenture.

“Prepay LLC” means Aron Energy Prepay 33 LLC, a limited liability company organized under the Laws of the State of Delaware.

“Prime Rate” means the fluctuating rate per annum equal to the “Prime Rate” listed daily in the “Money Rate” section of The Wall Street Journal, or if The Wall Street Journal is not published on a particular Business Day, then the “prime rate” published in any other national financial journal or newspaper selected by Issuer, with the written consent of the Trustee, and if more than one such rate is listed in the applicable publication, the highest rate shall be used; any change in the Prime Rate shall take effect on the date specified in the announcement of such change.

“Purchase Date” means (a) in the case of a sale pursuant to Section 2.2, the purchase date specified in the Swap Deficiency Option Notice delivered in accordance with Section 2.2(b) or (b) in the case of a sale pursuant to **Error! Reference source not found.**, the purchase date specified in the Elective Option Notice delivered in accordance with **Error! Reference source not found.**

“Purchase Price” has the meaning specified in Section 2.5.

“Receivables” means Swap Deficiency Receivables and Elective Receivables, as applicable.

“Repurchase Date” has the meaning specified in Section 3.1.

“Repurchase Notice” has the meaning specified in Section 3.1.

“Repurchase Price” has the meaning specified in Section 3.3.

“Swap Deficiency Identified Receivable” has the meaning specified in Section 2.2(b).

“Swap Deficiency Receivable Option Notice” has the meaning specified in Section 2.2(b).

“Swap Deficiency Receivable” has the meaning specified in Section 2.2(a).

“Swap Deficiency Receivables Amount” has the meaning specified in Section 2.2(a).

“Swap Deficiency Receivables Offer” has the meaning specified in Section 2.2(a).

“Swap Payment Deficiency” has the meaning specified in the Bond Indenture.

“Tax” means any federal, state, local or foreign taxes, and any profit, franchise (including without limitation those that are based on net worth, capitalization, income or total assets), sales, use, transfer, real property transfer, recording, payroll, employment, excise, withholding, social security (or similar), unemployment, disability, registration, alternative or add-on minimum, estimated, capital stock, value added, real or personal property, or other taxes, assessments, fees, levies, duties (including without limitation customs duties and similar charges), deductions or other charges of any nature whatsoever (including without limitation interest and penalties) imposed by any Law due and owing by Issuer.

“Transferee” has the meaning specified in Section 2.7.

ARTICLE II

PURCHASE OF RECEIVABLES

Section 2.1 Reserved.

Section 2.2 Swap Deficiency Receivables. Prepay LLC shall have an option to purchase certain Swap Deficiency Receivables from Issuer as described in this Section 2.2. Issuer shall sell to Prepay LLC, and Prepay LLC shall purchase, certain Swap Deficiency Receivables under the following circumstances:

(a) If (i) the Project Participant defaults on its obligation to make any payment under the Commodity Supply Contract with Issuer and (ii) such payment default results in a Swap Payment Deficiency, then on the Business Day following the day on which such default occurs, Issuer shall deliver a written offer (a “Swap Deficiency Receivables Offer”) in the form of Attachment 3 to this Exhibit to sell to Prepay LLC, at par, sufficient receivables (“Swap Deficiency Receivables”) (such amount, less any undisputed amounts owed by Issuer to the Project Participant under the Commodity Supply Contract, the “Swap Deficiency Receivables Amount”) to fund the Swap Payment Deficiency. Such Swap Deficiency Receivables Offer shall identify the Project Participant and include aging information and the face amount of the corresponding Swap Deficiency Receivables.

(b) No later than the Business Day following Prepay LLC’s receipt of a Swap Deficiency Receivables Offer, Prepay LLC may, but shall be under no obligation to, elect to purchase the Swap Deficiency Receivables referenced in the Swap Deficiency Receivables Offer by delivering a written notice (a “Swap Deficiency Receivable Option Notice”) in the form of Attachment 4 to this Exhibit to Issuer and the Trustee of Prepay LLC’s intent to purchase such Swap Deficiency Receivables (collectively, the “Swap Deficiency Identified Receivables”). The Swap Deficiency Receivable Option Notice will specify a Purchase Date that will be no later than the Payment Date (as defined in the Confirmation to the Buyer Swap) for the month in which Prepay LLC receives the Swap Deficiency Receivables Offer. If Prepay LLC does not deliver a Swap Deficiency Receivable Option Notice to Issuer and the Trustee on or before the Business Day following Prepay LLC’s receipt of a Swap Deficiency Receivables Offer, Prepay LLC will be deemed to have elected not to purchase the referenced Swap Deficiency Receivables.

(c) In accordance with the Seller Swap Custodial Agreements and the Bond Indenture, the Trustee shall, not later than the dates set forth below, deliver to the Custodian written notice as follows:

(i) on any Business Day on which Issuer or the Trustee delivers a Swap Deficiency Receivables Offer to Prepay LLC pursuant to Section 2.2(a) of this Exhibit, written notice that a Swap Payment Deficiency exists and the amount of such deficiency;

(ii) on any Business Day on which Prepay LLC is required to make an election to purchase Swap Deficiency Receivables pursuant to Section 2.2(b) of this Exhibit, written notice as to whether Prepay LLC has elected to purchase such Swap Deficiency Receivables and, if so, the Purchase Date of such Swap Deficiency Receivables; and

(iii) if Prepay LLC has elected to purchase Swap Deficiency Receivables, on the Purchase Date thereof written notice that the Purchase Price has been received by the Trustee pursuant to Section 2.6 hereof;

provided that, in addition to the foregoing, the Trustee shall deliver written notice to the Custodian if any Swap Payment Deficiency is otherwise cured on the date that such Swap Payment Deficiency is cured.

Section 2.3 Elective Receivables. Prepay LLC shall have an option to purchase certain Elective Receivables from Issuer as described in this Section 2.3. Issuer shall sell to Prepay LLC, and Prepay LLC shall purchase, certain Elective Receivables under the following circumstances:

(a) To the extent the Project Participant defaults on its obligation to make any payment under the Commodity Supply Contract and such payment default does not result in a Swap Payment Deficiency, then on such Business Day, Issuer shall deliver a written offer (a “Elective Receivables Offer”) in the form of Attachment 5 to sell to Prepay LLC, at par, the receivables relating to such payment default (“Elective Receivables”) (such amount, less any undisputed amounts owed by Issuer to the Project Participant under the Commodity Supply Contract, the “Elective Receivables Amount”). Such Elective Receivables Offer shall identify the Project Participant and include aging information and the face amount of the corresponding Elective Receivables.

(b) At any time after the receipt of an Elective Receivables Offer, Prepay LLC may, but shall be under no obligation to, elect to purchase the Elective Receivables referenced in the Elective Receivables Offer by delivering a written notice (an “Elective Receivable Option Notice”) in the form of Attachment 6 to this Exhibit to Issuer and the Trustee of Prepay LLC’s intent to purchase such Elective Receivables (collectively, the “Elective Identified Receivables”). The Elective Receivable Option Notice will specify a Purchase Date determined by Prepay LLC in its sole discretion.

Section 2.4 Sale and Transfer of Identified Receivables.

(a) Sale and Transfer. On each Purchase Date, Issuer shall sell, transfer, assign, convey and deliver to Prepay LLC, free and clear of all Encumbrances, all of Issuer's and the Trustee's right, title and interest in and to the Identified Receivables described in the applicable Swap Deficiency Receivable Option Notice or Elective Receivable Option Notice. For the purposes of calculating the face value of each Identified Receivable, the face value shall be equal to 100% of each Identified Receivable.

(b) Conditions Precedent to Issuer's Obligation to Sell. Issuer's obligation to sell the Identified Receivables pursuant to Section 2.2 of this Exhibit shall be subject to the following conditions precedent being satisfied on each Purchase Date:

(i) Prepay LLC and Issuer shall each have delivered to Issuer and the Trustee a duly executed counterpart of a Bill of Sale with respect to the sale of the Identified Receivables in the form of Attachment 1 hereto; and

(ii) The representations and warranties of Prepay LLC in Article VIII of the Agreement shall be true and correct in all material respects.

Section 2.5 Purchase Price; Payment of Purchase Price. The consideration for the Identified Receivables purchased by Prepay LLC shall equal the Swap Deficiency Receivables Amount or the Elective Receivables Amount, as applicable (the "Purchase Price").

Section 2.6 Payment of Purchase Price. Prepay LLC shall pay the Purchase Price to the Trustee not later than the applicable Purchase Date by wire transfer of immediately available funds to an account or accounts designated in writing by the Trustee.

Section 2.7 Transfer of Identified Receivables. At any time after or contemporaneous with its purchase of Identified Receivables hereunder, Prepay LLC shall have the right to sell, transfer, assign, convey and deliver all of its right, title and interest in and to any such Identified Receivables to any third party. Prepay LLC, while it holds title to any Identified Receivables purchased hereunder, and any such third party transferee, while it holds title to such Identified Receivables, shall be the "Transferee"; provided that (a) any provisions herein that set forth obligations of the Transferee shall be interpreted as requiring Prepay LLC to cause any third party transferee to comply with such provisions and (b) any Transferee other than Prepay LLC shall be a third party beneficiary of the provisions benefiting the Transferee and shall have the right to enforce such provisions. Prepay LLC shall provide prompt notice to Issuer and the Trustee of a transfer of Identified Receivables consistent with this Section 2.7, which notice shall include a notice address and payment instructions for any such Transferee. For the avoidance of doubt, any consideration received by Prepay LLC in connection with a transfer of Identified Receivables pursuant to this Section 2.7 shall not constitute payment of the Identified Receivables for purposes of this Exhibit.

Section 2.8 Instructions to Project Participant. No later than the applicable Purchase Date, Issuer shall irrevocably direct the Project Participant in writing to pay the applicable Identified Receivables to the Transferee pursuant to payment instructions to be supplied by the Transferee and shall copy the Transferee on all such directions. Issuer shall provide all documentation reasonably requested by the Transferee to support the calculation of

any Identified Receivable and, upon request by the Transferee, Issuer shall exercise reasonable efforts to assist the Transferee in collecting any Identified Receivable.

Section 2.9 Further Assurances. Issuer hereby agrees to perform, execute or deliver, or cause to be performed, executed or delivered, such further acts, assurances and instruments as the Transferee may reasonably require to complete or perfect the conveyance and transfer to the Transferee of all of Issuer's and the Trustee's right, title and interest in and to the Identified Receivables free and clear of any and all Encumbrances consistent with this Exhibit, and to do any and all such further acts and things as may be reasonably necessary to effect completely the intent of this Exhibit, including, but not limited to, directing the Project Participant to pay all Identified Receivables directly to the Transferee after the applicable Purchase Date. If any amounts are paid to Issuer or the Trustee by the Project Participant with respect to an Identified Receivable that has been sold in whole or in part to the Transferee under this Exhibit, Issuer shall promptly pay any such receipts to the Transferee without setoff of any kind.

Section 2.10 Taxes and Assessments. Notwithstanding anything to the contrary in this Exhibit, as between Issuer and the Transferee, Issuer shall be solely responsible for reporting and payment of all Taxes due or owing by Issuer with respect to transactions under the Commodity Supply Contract (including Gas or Electricity delivered thereunder), and Issuer shall indemnify the Transferee and its affiliates for any such Taxes paid by the Transferee or its affiliates.

Section 2.11 Interest. On the first day of each month, an interest amount shall be calculated equal to the Prime Rate plus 300 basis points per annum calculated on a 30/360 day basis multiplied by the Average Daily Receivables Balance during the prior month.

The "*Average Daily Receivables Balance*" during any month means the sum (but in no event less than zero) of (a) the cumulative interest accrued (whether paid or unpaid) with respect to Identified Receivables pursuant to this Section 2.11 as of the first day of such month, and (b) the average of the following amount (which can be positive or negative) calculated for each calendar day of such month: (i) the Purchase Price of such Identified Receivables minus (ii) the cumulative amount of all payments received by the Transferee from the Project Participant and from the Trustee or Issuer with respect to such Identified Receivables (including (A) interest payments and (B) any interest credits pursuant to Section 2.14(ii) of this Exhibit).

Section 2.12 Statements of Payments. Within ten Business Days after the end of each month during which any amounts are outstanding under this Exhibit, the Transferee will deliver to Issuer and the Trustee a statement setting forth each of the following as of the end of such month: (a) the Purchase Price of each Identified Receivable sold to the Transferee under this Exhibit; (b) cumulative interest accrued with respect to such Identified Receivables pursuant to Section 2.11 of this Exhibit; and (c) the cumulative amount of all payments received by the Transferee from the Project Participant and from the Trustee or Issuer with respect to such Identified Receivables (including (i) interest payments and (ii) any interest credits pursuant to Section 2.14(ii) of this Exhibit).

Section 2.13 Enforcement of Remedies. For as long as any amounts with respect to an Identified Receivable are owed to the Transferee under this Exhibit, the Transferee shall have the right to pursue payment from the Project Participant for such Identified Receivable and to enforce any remedies available to it against such Project Participant with respect to such Identified Receivable. The Transferee or Issuer may submit a request to the other parties to discuss coordination of collection efforts with respect to the Project Participant. Upon receipt of such request, the parties shall discuss in good faith coordination of collection efforts.

Section 2.14 Excess Payments. If at any time the Transferee receives an amount from any source in respect of any Identified Receivable in excess of the Purchase Price of such Identified Receivable, such amount shall be applied as follows: (i) if such amount is identifiable as payment in respect of the principal amount owing in respect of such Identified Receivable, the Transferee shall remit such amount to the Trustee; and (ii) if such amount is not identifiable as payment in respect of the principal as aforesaid, such amount shall first be credited towards any unpaid interest due to the Transferee under Section 2.11 above, and the Transferee shall remit to the Trustee any portion thereof in excess of any such interest.

ARTICLE III

REPURCHASE OF IDENTIFIED RECEIVABLES

Section 3.1 Repurchase of Identified Receivables. To the extent Identified Receivables sold to Prepay LLC remain unpaid by the Project Participant, Issuer shall have the right, on any day on which the Transferee has not been paid the full Repurchase Price for Identified Receivables that have been sold to Prepay LLC hereunder, to repurchase in whole or in part one or more Identified Receivables in accordance with this Section 3.1. Issuer shall deliver notice to Prepay LLC setting forth the portion of the Identified Receivables to be repurchased by Issuer (the "Repurchase Notice"). The repurchase date for the Identified Receivables specified in the Repurchase Notice ("Repurchase Date") shall be a date designated by Issuer that is no later than 12:00 noon New York City time on the first Business Day following receipt of such Repurchase Notice. In the event that funds to be used to repurchase Identified Receivables are insufficient to repurchase all outstanding Identified Receivables, Issuer shall use such funds to repurchase Identified Receivables in the order in which such Identified Receivables were sold to Prepay LLC, in minimum denominations of \$1,000.00.

Section 3.2 Repurchase and Transfer of Identified Receivables. On the Repurchase Date, Prepay LLC shall sell, transfer, assign, convey and deliver to Issuer, free and clear of all Encumbrances, all of Prepay LLC's right, title and interest in and to the portion of the Identified Receivables specified in the applicable Repurchase Notice. On the Repurchase Date, Prepay LLC shall deliver to Issuer an executed Bill of Sale evidencing the repurchase of the applicable portion of the Identified Receivables in the form of Attachment 2 hereto.

Section 3.3 Repurchase Price. The consideration for the portion of the Identified Receivables identified in the Repurchase Notice to be repurchased by Issuer (the "Repurchase Price") shall be equal to the Purchase Price for such portion of the Identified Receivables minus all payments received by Prepay LLC with respect to such portion of the Identified Receivables. For the avoidance of doubt, the Repurchase Price for an Identified

Receivable shall not be adjusted for the amount of any interest accrued from the Project Participant under the Commodity Supply Contract since the Purchase Date of such Identified Receivable.

Section 3.4 Payment of Repurchase Price. Issuer shall pay or cause to be paid the Repurchase Price to Prepay LLC on the Repurchase Date by wire transfer of immediately available funds to an account or accounts designated by Prepay LLC.

Section 3.5 Instructions to Project Participant. No later than the Repurchase Date, Prepay LLC shall irrevocably direct the Project Participant in writing to pay the Identified Receivables, to the extent such Identified Receivables are repurchased by Issuer pursuant to this Article III, to the Trustee pursuant to payment instructions to be supplied by the Trustee, and shall copy the Trustee on all such directions. If any such amounts are paid to Prepay LLC with respect to a portion of an Identified Receivable repurchased by Issuer or the Trustee, Prepay LLC shall promptly pay over any such receipts to the Trustee without setoff of any kind.

Section 3.6 Further Assurances. Prepay LLC hereby agrees to perform, execute or deliver, or cause to be performed, executed or delivered, such further acts, assurances and instruments as Issuer or the Trustee may reasonably require to complete or perfect the conveyance and transfer to the Trustee or Issuer of all of Prepay LLC's right, title and interest in and to the Identified Receivables repurchased by the Trustee or Issuer free and clear of any and all Encumbrances consistent with this Exhibit, and to do any and all such further acts and things as may be reasonably necessary to effect completely the intent of this Exhibit, including, but not limited to, directing the Project Participant to pay all Identified Receivables, to the extent such Identified Receivables are repurchased by Issuer pursuant to this Article III, directly to Issuer after the Repurchase Date.

Section 3.7 Limitation on Article III. The provisions of this Article III shall only apply to the extent the Transferee holding title to the relevant Identified Receivables agrees to comply with the terms hereof.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES

Section 4.1 Additional Representations and Warranties of Issuer. As a material inducement to the Transferee's acceptance of the terms of this Exhibit, Issuer hereby represents and warrants to the Transferee as of the date hereof and again on and as of each Purchase Date as follows:

(a) Title. Issuer has or will have at the time of purchase good title to all of the Identified Receivables, free and clear of any and all Encumbrances, other than Encumbrances in favor of the Trustee under the Bond Indenture. Pursuant to the Bond Indenture, Issuer has granted to the Trustee the right, power and authority to sell the Identified Receivables to the Transferee as set forth herein.

(b) Identified Receivables. All of the Identified Receivables are valid receivables arising from bona fide sales of goods or services in the ordinary course of business.

(c) Commodity Supply Contract. Except as may be limited by applicable bankruptcy, insolvency, reorganization, moratorium and similar Laws affecting creditors' rights generally and by general principles of equity:

(i) The Commodity Supply Contract pursuant to which an Identified Receivable is owed to Issuer is a valid and binding obligation of Issuer, enforceable against it in accordance with its terms, is in full force and effect, and has not been amended or supplemented in any material manner or respect except as otherwise indicated to the Transferee.

(ii) There are no breaches or defaults by Issuer of any of its obligations under the Commodity Supply Contract. Except as resulted from the action or omission of the Transferee, no other events have occurred that (with or without notice or lapse of time or both) would result in a breach or default by Issuer under any such Commodity Supply Contract.

(iii) None of the rights of Issuer under the Commodity Supply Contract will be impaired by the consummation of the transactions contemplated by this Exhibit.

(iv) Other than with respect to the Bond Indenture or with respect to transactions pursuant to this Exhibit, Issuer has not entered into any agreement (A) with any third party for the sale of the Commodity Supply Contract, (B) that grants any right or interest in the Commodity Supply Contract to any third party or (C) that encumbers in any manner any amounts receivable under the Commodity Supply Contract.

(v) The Commodity Supply Contract is managed and operated by the management and employees and contractors of Issuer and are not subject to any contract, agreement, or arrangement, written or oral, that purports to transfer any right or obligation to manage or operate the Commodity Supply Contract to any third Person.

(vi) Other than pursuant to the Bond Indenture, no condition or state of facts exists, or with due notice or lapse of time or both, would exist, which would entitle any Person to obtain any lien upon the Commodity Supply Contract.

Section 4.2 Survival of Representations and Warranties. All the provisions of this Exhibit will survive the Execution Date, any Purchase Date and any Repurchase Date indefinitely, notwithstanding any investigation at any time made by or on behalf of any party hereto, provided that the representations and warranties set forth in this Article IV and in any other provision of this Exhibit or in any certificate or other document delivered in connection herewith with respect to any of such representations and warranties will terminate and expire 24 months after the latest Purchase Date or Repurchase Date, except as follows: (x) the representations and warranties of Issuer which relate expressly or by necessary implication to Taxes will survive until the expiration of 30 days after the expiration of the applicable statutes of limitations (including all periods of extension and tolling); and (y) the representations and warranties of Issuer set forth in Section 4.1 of this Exhibit will survive forever. After a

representation and warranty has terminated and expired, no indemnification will or may be sought pursuant to Section 5.2 of this Exhibit on the basis of that representation and warranty by any Person who would have been entitled pursuant to Section 5.2 to indemnification on the basis of that representation and warranty prior to its termination and expiration, provided that in the case of each representation and warranty that will terminate and expire as provided in this Section 4.2, no claim presented in writing for indemnification pursuant to Section 5.2 on the basis of that representation and warranty prior to its termination and expiration will be affected in any way by that termination and expiration. Notwithstanding any of the foregoing, claims arising from fraud or knowing breaches of any representation or warranty will survive forever.

ARTICLE V

MISCELLANEOUS

Section 5.1 Notice of Payment Default. Issuer shall promptly, upon becoming aware of a payment default by the Project Participant under the Commodity Supply Contract, give Prepay LLC written notice of such default, sending a copy simultaneously to the Trustee.

Section 5.2 Indemnification. With respect to each indemnification included in this Exhibit, the indemnity is given to the fullest extent permitted by applicable Law and the following provisions shall be applicable.

(a) Indemnification of the Transferee by Issuer. Issuer shall indemnify and hold harmless the Transferee from and against and in respect of any and all claims, actions, demands, losses, costs, taxes, expenses, liabilities, penalties, and other damages, including, without limitation, attorneys' fees and other costs and expenses reasonably incurred in investigating, and attempting to avoid, or in opposing the imposition thereof, resulting to the Transferee from: (i) any inaccurate representation or warranty by Issuer in this Exhibit; (ii) prior to the applicable Repurchase Date, any amounts due or that become due to the Project Participant that reduce the amount of an Identified Receivable payable by such Project Participant from the amount specified in the relevant Swap Deficiency Receivable Option Notice or Elective Receivable Option Notice; (iii) the breach or default in the performance by Issuer of any of the obligations to be performed by Issuer hereunder; (iv) any non-fulfillment of any covenant or agreement in this Exhibit on the part of Issuer; (v) any liabilities of Issuer relating to the Commodity Supply Contract; and (vi) any liabilities of Issuer relating to the Identified Receivables.

(b) Indemnification of the Trustee by Issuer. Issuer shall indemnify and hold harmless the Trustee from and against and in respect of any and all claims, actions, demands, losses, costs, taxes, expenses, liabilities, penalties, and other damages, including without limitation, attorneys' fees and other costs and expenses reasonably incurred in investigating, and attempting to avoid, or in opposing the imposition thereof, resulting to the Trustee from: (i) any inaccurate representation or warranty by Issuer in this Exhibit; (ii) any amounts due or that become due to the Project Participant under the Commodity Supply Contract that reduce the amount of an Identified Receivable payable by such Project Participant from the amount specified in the relevant Swap Deficiency Receivable Option Notice or Elective Receivable Option Notice; (iii) the breach or default in the performance by Issuer of any of the obligations to

be performed by Issuer; (iv) any nonfulfillment of any covenant or agreement in this Exhibit on the part of Issuer; (v) any liabilities of Issuer relating to the Commodity Supply Contract; and (vi) any liabilities of Issuer relating to the Identified Receivables.

(c) Indemnification by the Transferee. The Transferee shall indemnify and hold harmless the Trustee and Issuer from and against and in respect of any and all claims, actions, demands, losses, costs, expenses, liabilities, penalties, and other damages, including, without limitation, attorneys' fees and other costs and expenses reasonably incurred in investigating, and attempting to avoid, or in opposing the imposition thereof, resulting to the Trustee or Issuer from: (i) any inaccurate representation or warranty by the Transferee in this Exhibit; (ii) the breach or default in the performance by the Transferee of any of the obligations to be performed by the Transferee hereunder; or (iii) any non-fulfillment of any covenant or agreement in this Exhibit on the part of the Transferee.

(d) Notice and Defense of Third-Party Claims. If any proceeding shall be brought or asserted against an indemnified party or any successor thereto (the "Indemnified Person") in respect of which indemnity may be sought under this Section 5.2 from an indemnifying person or any successor thereto (the "Indemnifying Person"), the Indemnified Person shall give written notice of such proceeding to the Indemnifying Person who shall assume the defense thereof, including the employment of counsel satisfactory to the Indemnified Person and the payment of all expenses; provided, that any delay or failure so to notify the Indemnifying Person shall relieve the Indemnifying Person of its obligations hereunder only to the extent, if at all, that it is prejudiced by reason of such delay or failure. In no event shall any Indemnified Person be required to make any expenditure or bring any cause of action to enforce the Indemnifying Person's obligations and liability under and pursuant to the indemnifications set forth in this Section 5.2. The Indemnified Person shall have the right to employ separate counsel in any of the foregoing proceedings and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of the Indemnified Person unless the Indemnified Person shall in good faith determine that there exist actual or potential conflicts of interest which make representation by the same counsel inappropriate. In the event that the Indemnifying Person, within five days after notice of any such proceeding, fails to assume the defense thereof, the Indemnified Person shall have the right to undertake the defense, compromise or settlement of such proceeding, for the account of the Indemnifying Person, subject to the right of the Indemnifying Person to assume the defense of such proceeding with counsel satisfactory to the Indemnified Person at any time prior to the settlement, compromise or final determination thereof. Anything in this Section 5.2 to the contrary notwithstanding, the Indemnifying Person shall not, without the Indemnified Person's prior written consent, such consent not to be unreasonably withheld, settle or compromise any proceeding or consent to the entry of any judgment with respect to any proceeding; provided that the Indemnifying Person may, without the consent of the Indemnified Person, settle any proceeding for the payment of money with no other liability and no admission of responsibility.

(e) Survival. The indemnifications included in this Exhibit shall survive termination of the Agreement.

Section 5.3 Modification of Bond Indenture. Issuer agrees and covenants that, as long as this Agreement is in effect, it shall not amend or consent to the amendment of any

provision of the Bond Indenture (including without limitation Article V of the Bond Indenture) that would be reasonably likely to have a material adverse impact on the effectiveness of this Exhibit or the transactions contemplated by this Exhibit without the prior written consent of the Transferee, such consent not to be unreasonably withheld.

Section 5.4 Non-Severability; Miscellaneous. For the avoidance of doubt, the obligations of the parties pursuant to this Exhibit are an integral part of this Agreement and may not be severed from such agreement in any way whatsoever, whether by transfer, assignment or otherwise.

Section 5.5 Certain Terms Relating to the Trustee.

(a) The Trustee shall have no duties or obligations under or in respect of this Exhibit other than those specifically enumerated in this Exhibit and the Trustee has assumed no implied duties hereunder. Without limiting the foregoing, nothing herein shall be construed to impose upon the Trustee any duties, obligations or liabilities of Issuer, or to make the Trustee responsible for the actions or omissions of Issuer.

(b) In taking any action (or forbearing from action) under or pursuant to this Exhibit, and with respect to all matters arising under this Exhibit, the Trustee shall have the rights, powers, indemnities and other protections granted or made available to it under the terms of the Bond Indenture.

(c) The Trustee has acted solely in its capacity as Trustee under the Bond Indenture in accepting certain responsibilities set forth in this Exhibit. Notwithstanding any term herein or elsewhere to the contrary, and for the avoidance of doubt, any obligation hereunder on the part of the Trustee to sell Receivables shall be limited to such rights, title and interests in such applicable Receivables as it may hold under the Bond Indenture, and any obligation hereunder on the part of the Trustee to purchase Receivables shall be limited to such funds as may be held by it under, and available for such purpose under the terms of, the Bond Indenture; and in each such case any recourse hereunder against the Trustee with respect to such Receivables or such obligation to sell or purchase Receivables shall be limited to such rights, title and interests in the applicable Receivables, or such funds available for the purchase thereof, as the case may be, as it may hold in its capacity as Trustee under the Bond Indenture.

(d) Notwithstanding any term hereof to the contrary and for the avoidance of doubt, it is acknowledged and agreed that the Trustee shall have the authority to take such actions as it may deem necessary under this Exhibit as agent and on behalf of the Issuer pursuant to and as provided in the Bond Indenture (subject to the rights retained by the Issuer thereunder, in the absence of conflicting actions by the Trustee, to exercise its rights hereunder), including without limitation the right of the Trustee upon the occurrence of an Event of Default under the Bond Indenture to notify the Issuer to cease exercising its rights hereunder.

[Remainder of Page Left Blank Intentionally]

ATTACHMENT 1

FORM OF BILL OF SALE (PURCHASE)

This Bill of Sale dated effective as of the ___ day of _____, ____ (this “Bill of Sale”) is executed and delivered by [Computershare]., as Trustee (the “Trustee”), as agent for and on behalf of Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Article 1, Chapter 5, Division 7, Title 1, Section 6500 et seq. of the California Government Code, as amended) (“Issuer”), to Aron Energy Prepay 33 LLC, a Delaware limited liability company (“Prepay LLC”).

RECITALS

WHEREAS, the Trustee, as agent for and on behalf of the Issuer, desires to sell to Prepay LLC, on behalf of Issuer, and Prepay LLC desires to purchase from the Trustee, as agent for and on behalf of the Issuer, the Identified Receivables, as such term is defined in Exhibit E to the Amended & Restated Prepaid Commodity Sales Agreement (the “Agreement”), by and between Prepay LLC and Issuer, dated as of [____], 2024 (the “Receivables Purchase Exhibit”); and

WHEREAS, any capitalized term used herein and not otherwise defined shall have the meaning ascribed to it in the Receivables Purchase Exhibit.

AGREEMENT

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and pursuant to the authority granted by Issuer to the Trustee in the Bond Indenture, the Trustee hereby sells, transfers, assigns, conveys and delivers to Prepay LLC and its successors and assigns all of the Trustee’s and Issuer’s right, title and interest in and to the Identified Receivables as set forth in the Swap Deficiency Receivable Option Notice or Elective Receivable Option Notice attached hereto as Schedule 1 (the “Assets”), free and clear of any and all Encumbrances other than Encumbrances under the Bond Indenture.

TO HAVE AND TO HOLD unto Prepay LLC and its successors and assigns forever the Assets, together with, all and singular, the rights and appurtenances thereto in any way belonging to the Trustee or Issuer; and each of Trustee and Issuer does hereby agree to confirm to any other Person the ownership of the Assets by Prepay LLC.

A true and correct copy of the Swap Deficiency Receivable Option Notice or Elective Receivable Option Notice, as applicable, is attached hereto as Schedule 1.

The Trustee warrants that it has the right to convey and transfer to Prepay LLC all rights to the Identified Receivables to the extent such rights were transferred to the Trustee under the Bond Indenture, free and clear of any Encumbrances that may have arisen from any act or

omission of the Issuer or the Trustee, including without limitation Encumbrances in favor of the Trustee under the Bond Indenture. The sale, assignment, conveyance and delivery of the Call Identified Receivables by the Trustee herein is without recourse other than as provided in the immediately preceding sentence and Section 5.2(a) of the Receivables Purchase Exhibit, and without representation or warranty by the Trustee other than as provided in the immediately preceding sentence.

Issuer hereby (i) warrants that the Trustee has the right, as agent of the Issuer, to convey and transfer to Prepay LLC the rights to the Identified Receivables under the Bond Indenture free and clear of any Encumbrances that may have arisen from any act or omission of the Issuer, and (ii) agrees to perform, execute and/or deliver or cause to be performed, executed and/or delivered, any and all such further acts, assurances and instruments as Prepay LLC may reasonably require to complete or perfect the conveyance and transfer to Prepay LLC of all of Issuer's right, title and interest in and to the Assets hereby assigned, and to do all such further acts and things as may be reasonably necessary or useful to effect completely the intent of this Bill of Sale.

By its acceptance of and agreement to this Bill of Sale, Prepay LLC hereby certifies to the Trustee that each of the representations and warranties of Prepay LLC set forth in Article VIII of the Agreement, as of the date hereof, is true and correct in all material respects.

This Bill of Sale shall be governed by and construed in accordance with Article X (Jurisdiction; Waiver of Jury Trial) and Section 19.4 (Governing Law) of the Agreement.

This Bill of Sale is executed and delivered pursuant to Section 2.4 of the Receivables Purchase Exhibit, and is subject and subordinate to all of the terms and provisions of the Receivables Purchase Exhibit. In the event of any conflict between any term or provision hereof and any term or provision of the Receivables Purchase Exhibit, the latter shall control.

This Bill of Sale shall be binding upon the Trustee and Issuer and their respective successors and assigns, and shall inure to the benefit of Prepay LLC and its successors and assigns.

This Bill of Sale may not be amended or altered except in a writing signed by each of the Trustee, Issuer and Prepay LLC.

This Bill of Sale is executed and delivered by the Trustee solely in its capacity as such under the Bond Indenture, and not individually, and in so doing the Trustee shall have the benefit of the rights and protections granted to it under the Bond Indenture.

This Bill of Sale may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

EXECUTED AND DELIVERED effective as of the date first written above.

[COMPUTERSHARE], as Trustee

By: _____
Name: _____
Title: _____

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By: _____
Name: _____
Title: _____

Accepted and Agreed by:

ARON ENERGY PREPAY 33 LLC
By: J. Aron & Company LLC, its Manager

By: _____
Name: _____
Title: _____

Schedule 1 to Bill of Sale
Copy of Swap Deficiency Receivable Option Notice or Elective Receivable Option Notice

[Notice to be attached at the time the Bill of Sale is executed]

ATTACHMENT 2

FORM OF BILL OF SALE (REPURCHASE)

This Bill of Sale dated effective as of the ___ day of _____, _____ (this “Bill of Sale”) is executed and delivered by Aron Energy Prepay 33 LLC, a Delaware limited liability company (“Prepay LLC”), to [Computershare], as Trustee (the “Trustee”).

RECITALS

WHEREAS, Prepay LLC desires to sell to the Trustee, and the Trustee desires to purchase from Prepay LLC, in each case as agent for and on behalf of Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Article 1, Chapter 5, Division 7, Title 1, Section 6500 et seq. of the California Government Code, as amended) (“Issuer”), the Identified Receivables (as such term is defined in Exhibit E to the Amended & Restated Prepaid Commodity Sales Agreement (the “Agreement”), by and between Prepay LLC and Issuer, dated as of [____], 2024 (the “Receivables Purchase Exhibit”); and

WHEREAS, any capitalized term used herein and not otherwise defined shall have the meaning ascribed to it in the Receivables Purchase Exhibit.

AGREEMENT

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Prepay LLC hereby sells, transfers, assigns, conveys and delivers to the Trustee and its successors and assigns all of Prepay LLC’s right, title and interest in and to the Identified Receivables as set forth in the Repurchase Notice attached hereto as Schedule 1 (the “Assets”), free and clear of any and all Encumbrances.

TO HAVE AND TO HOLD unto the Trustee and its successors and assigns forever on behalf of Issuer the Assets, together with, all and singular, the rights and appurtenances thereto in any way belonging to Prepay LLC; and Prepay LLC does hereby agree to confirm to any other Person the ownership of the Assets by the Trustee.

A true and correct copy of the Repurchase Notice is attached hereto as Schedule 1.

Prepay LLC warrants that it has the right to convey and hereby transfers to the Trustee all rights to the applicable Identified Receivables to the extent such rights were transferred to Prepay LLC, free and clear of any Encumbrances that may have arisen from any act or omission of Prepay LLC.

Prepay LLC hereby agrees to perform, execute and/or deliver, or cause to be performed, executed and/or delivered, any and all such further acts, assurances and instruments as the Trustee may reasonably require to complete or perfect the conveyance and transfer to the

Trustee of all of Prepay LLC's right, title and interest in and to the Assets hereby assigned, and to do all such further acts and things as may be reasonably necessary or useful to effect completely the intent of this Bill of Sale.

This Bill of Sale shall be governed by and construed in accordance with Article X (Jurisdiction; Waiver of Jury Trial) and Section 19.4 (Governing Law) of the Agreement.

This Bill of Sale is executed and delivered pursuant to Section 3.2 of the Receivables Purchase Exhibit, and is subject and subordinate to all of the terms and provisions of the Receivables Purchase Exhibit. In the event of any conflict between any term or provision hereof and any term or provision of the Receivables Purchase Exhibit, the latter shall control.

This Bill of Sale shall be binding upon Prepay LLC and its successors and assigns, and shall inure to the benefit of the Trustee and its successors and assigns on behalf of Issuer.

This Bill of Sale may not be amended or altered except in a writing signed by each of the Trustee and Prepay LLC.

This Bill of Sale may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

EXECUTED AND DELIVERED effective as of the date first written above.

ARON ENERGY PREPAY 33 LLC
By: J. Aron & Company LLC, its Manager

By: _____
Name:
Title:

Accepted and Agreed by:

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By:
Name: _____
Title: _____

[COMPUTERSHARE], as Trustee

By: _____
Name:
Title:

**Schedule 1 to Bill of Sale
Copy of Repurchase Notice**

[Repurchase Notice to be attached at the time the Bill of Sale is executed]

ATTACHMENT 3

FORM OF SWAP DEFICIENCY RECEIVABLES OFFER

[Date]

Aron Energy Prepay 33 LLC
c/o J. Aron & Company LLC
200 West Street
New York, New York 10282-2198
Email: gs-prepay-notices@gs.com

Re: Exhibit E to the Amended & Restated Prepaid Commodity Sales Agreement, by and between Aron Energy Prepay 33 LLC (“Prepay LLC”) and Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Article 1, Chapter 5, Division 7, Title 1, Section 6500 et seq. of the California Government Code, as amended) (“Issuer”), dated as of [____], 2024 (the “Receivables Purchase Exhibit”)

Pursuant to and in accordance with Section 2.2(a) of the Receivables Purchase Exhibit, the Trustee, as agent for and on behalf of the Issuer, hereby delivers this Swap Deficiency Receivables Offer as of the date hereof with respect to the below Swap Deficiency Identified Receivables.

[Project Participant(s) and/or Specified Project Participant(s)]	Date of Payment Default(s)	Principal Amount	Interest

Capitalized terms used herein and not otherwise defined shall have the meaning assigned in the Receivables Purchase Exhibit.

[COMPUTERSHARE], as Trustee

By: _____

Name:

Title:

ATTACHMENT 4

FORM OF SWAP DEFICIENCY RECEIVABLE OPTION NOTICE

[Date]

[Computershare]

[]

[]

[]

Northern California Energy Authority
c/o Sacramento Municipal Utility District
6301 S Street
Sacramento, CA 95817-1899

Re: Exhibit E to the Amended & Restated Prepaid Commodity Sales Agreement, by and between Aron Energy Prepay 33 LLC (“Prepay LLC”) and Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Article 1, Chapter 5, Division 7, Title 1, Section 6500 et seq. of the California Government Code, as amended) (“Issuer”), dated as of [], 2024 (the “Receivables Purchase Exhibit”)

Pursuant to and in accordance with Section 2.2(b) of the Receivables Purchase Exhibit and with respect to that certain Swap Deficiency Receivables Offer delivered by the Trustee, as agent for and on behalf of the Issuer, on [], Prepay LLC hereby delivers this Swap Deficiency Receivable Option Notice as of the date hereof with respect to, and to confirm its intent to purchase, the below Swap Deficiency Identified Receivables and designates a Purchase Date of [].

[Project Participant(s) and/or Specified Project Participant(s)]	Date of Payment Default(s)	Principal Amount	Interest

Capitalized terms used herein and not otherwise defined shall have the meaning assigned in the Receivables Purchase Exhibit.

[Signature Pages Follow]

ARON ENERGY PREPAY 33 LLC
By: J. Aron & Company LLC,
its Manager

By: _____
Name:
Title:

ATTACHMENT 5

FORM OF ELECTIVE RECEIVABLES OFFER

[Date]

Aron Energy Prepay 33 LLC
c/o J. Aron & Company LLC
200 West Street
New York, New York 10282-2198
Email: gs-prepay-notices@gs.com

Re: Exhibit E to the Amended & Restated Prepaid Commodity Sales Agreement, by and between Aron Energy Prepay 33 LLC (“Prepay LLC”) and Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Article 1, Chapter 5, Division 7, Title 1, Section 6500 et seq. of the California Government Code, as amended) (“Issuer”), dated as of [____], 2024 (the “Receivables Purchase Exhibit”)

Pursuant to and in accordance with Section 2.3(a) of the Receivables Purchase Exhibit, the Trustee, as agent for and on behalf of the Issuer, hereby delivers this Elective Receivables Offer as of the date hereof with respect to the below Elective Identified Receivables.

Project Participant	Date of Payment Default(s)	Principal Amount	Interest

Capitalized terms used herein and not otherwise defined shall have the meaning assigned in the Receivables Purchase Exhibit.

[COMPUTERSHARE], as Trustee

By: _____
Name:
Title:

ATTACHMENT 6

FORM OF ELECTIVE RECEIVABLE OPTION NOTICE

[Date]

[Computershare]

[]

[]

[]

Northern California Energy Authority
c/o Sacramento Municipal Utility District
6301 S Street
Sacramento, CA 95817-1899

Re: Exhibit E to the Amended & Restated Prepaid Commodity Sales Agreement, by and between Aron Energy Prepay 33 LLC (“Prepay LLC”) and Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Article 1, Chapter 5, Division 7, Title 1, Section 6500 et seq. of the California Government Code, as amended) (“Issuer”), dated as of [____], 2024 (the “Receivables Purchase Exhibit”)

Pursuant to and in accordance with Section 2.3(b) of the Receivables Purchase Exhibit and with respect to that certain Elective Receivables Offer delivered by the Trustee, as agent for and on behalf of the Issuer, on [____], Prepay LLC hereby delivers this Elective Receivable Option Notice as of the date hereof with respect to, and to confirm its intent to purchase, the below Elective Identified Receivables and designates a Purchase Date of [____].

Project Participant	Date of Payment Default(s)	Principal Amount	Interest

Capitalized terms used herein and not otherwise defined shall have the meaning assigned in the Receivables Purchase Exhibit.

ARON ENERGY PREPAY 33 LLC
By: J. Aron & Company LLC,
its Manager

By:
Name:
Title:

EXHIBIT F

PRICING AND OTHER TERMS

Administrative Fee:	<p> \$[]/MMBtu during the Gas Delivery Period \$[]/MWh during the Electricity Delivery Period while deliveries are only to the Primary Electricity Delivery Point </p>
Delivery Period:	<p> The period beginning on [], and ending on [], 20[] or earlier upon the Commodity Delivery Termination Date; provided that the Delivery Period shall end immediately upon the effective termination date of this Agreement pursuant to <u>Article XVII</u> hereof. </p>
Current Reset Period:	<p> The period beginning on [] and ending on []. </p>
Minimum Discount Percentage:	<p> [] percent ([]%) for the Current Reset Period, and thereafter an amount no less than \$[]/MMBtu during the Gas Delivery Period and \$[]/MWh during the Electricity Delivery Period while deliveries are only to the Primary Electricity Delivery Point. </p>
Monthly Discount Percentage:	<p> [] percent ([]%) during the Current Reset Period, and for each Month of a Reset Period thereafter, the Monthly Discount Percentage portion of the Available Discount Percentage for such Reset Period determined by the Calculation Agent pursuant to the Re-Pricing Agreement. </p>
Prepayment:	<p> \$[] </p>
Prepayment Outside Date:	<p> [] </p>
Remarketing Fee:	<p> <u>During the Gas Delivery Period:</u> \$[]/MMBtu for any Gas remarketed pursuant to a Monthly Remarketing Notice \$[]/MMBtu for any Gas remarketed pursuant to a Daily Remarketing Notice \$[]/MMBtu for any Gas remarketed pursuant to a Deemed Remarketing Notice </p> <p> <u>During the Electricity Delivery Period:</u> \$[]/MWh for any Electricity remarketed pursuant to a Monthly Remarketing Notice \$[]/MWh for any Electricity remarketed pursuant to a Daily Remarketing Notice \$[]/MWh for any Electricity remarketed pursuant to a Deemed Remarketing Notice </p>

Fixed Price:	<p>\$[]/MMBtu during the Gas Delivery Period \$[]/MWh during the Electricity Delivery Period while deliveries are only to the Primary Electricity Delivery Point</p>
Specified Fixed Price:	<p>\$[]/MMBtu during the Gas Delivery Period if only natural gas deliveries \$[]/MWh during the Electricity Delivery Period if only electric deliveries to the Primary Electricity Delivery Point</p>
Discount Rate Spread:	[] basis points per annum
Specified Discount Percentage:	<p>For Commodities delivered [] – [], 20[]: [] percent ([]%) For Commodities delivered [] – [], 20[]: to be the Available Discount Percentage (as defined in the Re-Pricing Agreement) for such Reset Period</p>

EXHIBIT G-1
GAS COMMUNICATIONS PROTOCOL

[To be attached.]⁸

⁸ SM NTD: To attach the final agreed version from the Commodity Supply Contract.

EXHIBIT G-2
ELECTRICITY COMMUNICATIONS PROTOCOL

[To be attached.]⁹

⁹ SM NTD: To attach the final agreed version from the Commodity Supply Contract.

**DRAFT AMENDED AND RESTATED COMMODITY SUPPLY
CONTRACT**

AMENDED & RESTATED COMMODITY SUPPLY CONTRACT

between

NORTHERN CALIFORNIA ENERGY AUTHORITY

and

SACRAMENTO MUNICIPAL UTILITY DISTRICT

Dated as of [____], 2024

TABLE OF CONTENTS

	<u>Page</u>
Article I Definitions.....	1
Section 1.1 Defined Terms	1
Section 1.2 Definitions; Interpretation.....	13
Article II Execution Date and Delivery Period; Nature of Commodity Project.....	13
Section 2.1 Execution Date; Delivery Period	13
Section 2.2 Nature of Commodity Project.....	13
Section 2.3 Pledge of this Agreement.....	13
Article III Sale and Purchase.....	13
Section 3.1 Sale and Purchase of Commodities.....	14
Section 3.2 Pricing.....	14
Section 3.3 Switch Date to Commence Electricity Deliveries; Assignment of Agreements.....	14
Section 3.4 Reset Period Remarketing.....	15
Article IV Failure to Deliver or Take Commodities	16
Section 4.1 Issuer’s Failure to Deliver the Contract Quantity (Not Due to Force Majeure).....	16
Section 4.2 Purchaser’s Failure to Take the Contract Quantity (Not Due to Force Majeure).....	17
Section 4.3 Sole Remedies.....	17
Section 4.4 Limitations	17
Article V Transportation and Delivery; Communications	18
Section 5.1 Delivery Point	18
Section 5.2 Responsibility for Transportation; Permits.....	18
Section 5.3 Title and Risk of Loss.....	19
Section 5.4 Daily Flow Rates.....	19
Section 5.5 Imbalances	20
Section 5.6 Communications Protocol.....	20
Section 5.7 Gas Quality and Measurement.....	20
Section 5.8 Limitations	21
Article VI Gas Assignment Agreements	21
Section 6.1 Upstream Supply Contract Assignments	21
Section 6.2 Adjustments to Contract Quantity	21
Article VII Use of Commodities.....	21

TABLE OF CONTENTS

(continued)

Section 7.1	Tax Exempt Status of the Bonds.....	21
Section 7.2	Priority Commodities.....	21
Section 7.3	Assistance with Sales to Third Parties	21
Section 7.4	Qualifying Use	22
Section 7.5	Remediation	22
Section 7.6	Semi-Annual Report; Ledger Entries; Redemption.....	22
Article VIII Representations and Warranties; additional covenants		23
Section 8.1	Representations and Warranties of Issuer.....	23
Section 8.2	Warranty of Title.....	24
Section 8.3	Disclaimer of Warranties	24
Section 8.4	Continuing Disclosure	24
Article IX Taxes		25
Article X Waiver of Jury Trial		25
Article XI Force Majeure.....		25
Section 11.1	Applicability of Force Majeure.....	25
Section 11.2	Settlement of Labor Disputes.....	26
Article XII Governmental Rules and Regulations		26
Section 12.1	Compliance with Laws	26
Section 12.2	Contests.....	26
Section 12.3	Defense of Agreement	26
Article XIII ASSIGNMENT		26
Article XIV Payments.....		27
Section 14.1	Monthly Statements	27
Section 14.2	Payment.....	27
Section 14.3	Payment of Disputed Amounts	28
Section 14.4	Late Payment	28
Section 14.5	Audit; Adjustments	28
Section 14.6	Netting; No Set-Off.....	29
Section 14.7	Source of Purchaser's Payments.....	29
Section 14.8	Rate Covenant.....	29
Section 14.9	Pledge of Utility Revenues	29
Article XV PPA Assignment Agreements.....		29

TABLE OF CONTENTS

(continued)

Section 15.1	Generally.....	30
Section 15.2	Early Termination of Assignment Period.....	30
Article XVI Notices.....		30
Article XVII Default; Remedies; Termination.....		30
Section 17.1	Issuer Default.....	30
Section 17.2	Purchaser Default.....	31
Section 17.3	Remedies Upon Default.....	31
Section 17.4	Termination of Prepaid Agreement	32
Section 17.5	Limitation on Damages.....	33
Article XVIII Miscellaneous		34
Section 18.1	Indemnification Procedure.....	34
Section 18.2	Deliveries	34
Section 18.3	Entirety; Amendments	34
Section 18.4	Governing Law	34
Section 18.5	Non-Waiver.....	35
Section 18.6	Severability	35
Section 18.7	Exhibits	35
Section 18.8	Winding Up Arrangements.....	35
Section 18.9	Relationships of Parties.....	35
Section 18.10	Immunity.....	35
Section 18.11	Rates and Indices	35
Section 18.12	Limitation of Liability.....	35
Section 18.13	Counterparts.....	36
Section 18.14	Third Party Beneficiaries; Rights of Trustee	36
Section 18.15	Waiver of Defenses.....	36
Section 18.16	Rate Changes	36
Exhibit A	- Delivery Points; Contract Quantities	
Exhibit B	- Notices	
Exhibit C	- Form of Remarketing Election Notice	
Exhibit D	- Form of Federal Tax Certificate	
Exhibit E	- Form of Opinion of Counsel to Purchaser	
Exhibit F	- Pricing and Other Terms	
Exhibit G-1	- Gas Communications Protocol	

TABLE OF CONTENTS
(continued)

Exhibit G-2 - Electricity Communications Protocol
Exhibit H - Assignment of Assignable Contracts

AMENDED & RESTATED COMMODITY SUPPLY CONTRACT

This Amended & Restated Commodity Supply Contract (hereinafter “Agreement”) is made and entered into as of [____], 2024 (the “Execution Date”), by and between Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Chapter 5 of Division 7 of Title 1 of the California Government Code, as amended) (“Issuer”) and Sacramento Municipal Utility District, a municipal utility district organized under the provisions of the Municipal Utility District Act (Division 6, Chapter 2, Articles 2 and 3, Sections 11581 through 11614 of the California Public Utilities Code, as amended) (“Purchaser”). Each of Issuer and Purchaser is sometimes individually referred to herein as a “Party”, and collectively as the “Parties”.

W I T N E S S E T H:

WHEREAS, Issuer and Purchaser previously entered into that certain Commodity Supply Contract dated as of December 10, 2018 (the “Original Agreement”); and

WHEREAS, the Parties desire to amend and restate the Original Agreement in its entirety in connection with the issuance by Issuer of its [Commodity Supply Revenue Bonds, Series 2024] (the “Bonds”);

NOW, THEREFORE, in consideration of the premises and mutual covenants set forth in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE I DEFINITIONS

Section 1.1 Defined Terms. The following terms, when used in this Agreement and identified by the capitalization of the first letter thereof, have the respective meanings set forth below, unless the context otherwise requires:

“Administrative Fee” means the amount specified in Exhibit F.

“Affiliate” means, with respect to either Party, any entity which is a direct or indirect parent or subsidiary of such Party or which directly or indirectly (i) owns or controls such Party, (ii) is owned or controlled by such Party, or (iii) is under common ownership or control with such Party. For purposes of this definition, “control” of an entity means the power, directly or indirectly, either to (a) vote 50% or more of the securities having ordinary voting power for the election of directors or Persons performing similar functions or (b) direct or cause the direction of the management and policies, whether by contract or otherwise.

“Agreement” has the meaning specified in the preamble and shall include exhibits, recitals and attachments referenced herein and attached hereto and all amendments, supplements and modifications hereto and thereto.

“Alternate Electricity Delivery Point” has the meaning specified in Section 5.1(c).

“Alternate Gas Delivery Point” has the meaning specified in Section 5.1(a).

“Annual Refund” means the annual refund, if any, provided to Purchaser and calculated pursuant to the procedures specified in Section 3.2(c).

“APC Contract Price” has the meaning specified in Exhibit H.

“APC Party” has the meaning specified in Exhibit H.

“Applicable Rating Agencies” means, at any given time, each Rating Agency then rating the Bonds.

“Assignable Contract” has the meaning specified in Section 15.1.

“Assigned Delivery Point” means, with respect to any Assigned Electricity, the Assigned Delivery Point as set forth in the applicable Assignment Schedule for such Assigned Electricity.

“Assigned Electricity” means any Electricity under a PPA Assignment Agreement to be delivered to J. Aron pursuant to the terms thereof.

“Assigned Gas” means any Gas under a Gas Assignment Agreement to be delivered to J. Aron pursuant to the terms thereof.

“Assigned PAYGO Amount” means, for any Month during the Electricity Delivery Period, the amount, if any, by which the quantity of Assigned Electricity (in MWh) delivered under a PPA Assignment Agreement in such Month exceeds the Assigned Prepay Quantity thereunder for such Month.

“Assigned Prepay Quantity” has the meaning specified in Exhibit H.

“Assigned Product” means Assigned Electricity, Assigned RECs and any other Electricity Product included on an Assignment Schedule, subject to the limitations for such other Electricity Product set forth in Exhibit H during the Electricity Delivery Period

“Assigned RECs” means any RECs to be delivered to Purchaser pursuant to any Assigned Rights and Obligations.

“Assigned Rights and Obligations” has the meaning specified in Section 15.1.

“Assignment Period” has the meaning specified in any Gas Assignment Agreement or PPA Assignment Agreement entered into consistent with the applicable terms of this Agreement.

“Assignment Schedule” has the meaning specified in Exhibit H.

“Available Discount Percentage” has the meaning specified in the Re-Pricing Agreement. For the avoidance of doubt, the “Available Discount Percentage” under the Re-Pricing Agreement includes the Monthly Discount as well as additional discounting expected to be made available in the Annual Refund.

“Billing Date” has the meaning specified in Section 14.1(b).

“Billing Statement” has the meaning specified in Section 14.1(b).

“Bond Closing Date” means the first date on which the Bonds are issued pursuant to the Bond Indenture.

“Bond Indenture” means (i) the Amended & Restated Trust Indenture dated as of [____], 2024, between Issuer and the Trustee, as further supplemented and amended from time to time in accordance with its terms, and (ii) any trust indenture entered into in connection with the commencement of any Interest Rate Period after the initial Interest Rate Period between Issuer and the Trustee containing substantially the same terms as the indenture described in clause (i) and which is intended to replace the indenture described in clause (i) as of the commencement of such Interest Rate Period.

“Bonds” has the meaning specified in the recitals of this Agreement.

“Btu” means one (1) British thermal unit, the amount of heat required to raise the temperature of one (1) pound of water one (1) degree Fahrenheit at sixty (60) degrees Fahrenheit, and is the International Btu. The reporting basis for Btu is 14.73 psia and sixty (60) degrees Fahrenheit, *provided*, however, that the definition of Btu as determined by the operator of the relevant Delivery Point shall be deemed conclusive in accordance with Section 5.7 of the Prepaid Agreement; and *provided*, further, that in the event of an inconsistency in the definition of “Btu” between this definition and the definition of “Btu” in the Prepaid Agreement, the definition in the Prepaid Agreement shall apply.

“Business Day” means any day other than (i) a Saturday or Sunday, (ii) a Federal Reserve Bank Holiday, (iii) any other day on which commercial banks in either New York, New York or the State of California are authorized or required by Law to close, or (iv) any other day excluded pursuant to the Bond Indenture.

“CAISO” means California Independent System Operator or its successor.

“Calculation Agent” has the meaning specified in the Re-Pricing Agreement.

“Claiming Party” has the meaning specified in Section 11.1.

“Claims” means all claims or actions, threatened or filed, that directly or indirectly relate to the indemnities provided herein, and the resulting losses, damages, expenses, attorneys’ fees, experts’ fees, and court costs, whether incurred by settlement or otherwise, and whether such claims or actions are threatened or filed prior to or after the termination of this Agreement.

“Code” means the Internal Revenue Code of 1986, as amended.

“Commercially Reasonable” or “Commercially Reasonable Efforts” means, with respect to any purchase or sale or other action required to be made, attempted or taken by a Party under this Agreement, such efforts as a reasonably prudent Person would undertake for the protection of its own interest under the conditions affecting such purchase or sale or other action, including without limitation, the amount of notice of the need to take such action, the duration and type of the purchase or sale or other action, the competitive environment in which such purchase or sale or other action occurs, and the risk to the Party required to take such action.

“Commodity” means Gas or Electricity and, to the extent included on an Assignment Schedule, Electricity Product related to the foregoing; provided that the inclusion of any Electricity on an Assignment Schedule is subject to the limitations set forth in Exhibit H, as applicable.

“Commodity Project” has the meaning specified in the Bond Indenture.

“Contract Price” means: (a) during the Gas Delivery Period for each Month of Gas deliveries and each Delivery Point, (i) with respect to any Month for which the Contract Specified Price is a Monthly Index Price, (A) the Contract Specified Price for such Delivery Point for such Month, plus (B) any applicable Delivery Point Premium less (C) the product of (i) the Prepay Fixed Price multiplied by the Monthly Discount Percentage and (ii) with respect to any Month for which the Contract Specified Price is a fixed price, (A) the Assigned Contract Price (as defined in the relevant Gas Assignment Agreement entered into pursuant to Exhibit G-1) multiplied by (B) the result of 100% less the Monthly Discount Percentage, and (b) during the Electricity Delivery Period for each Delivery Hour of Electricity deliveries and each Delivery Point, the Day-Ahead Market Price for such Delivery Point for such Delivery Hour less the product of the Prepay Fixed Price multiplied by the Monthly Discount Percentage; *provided* that (I) with respect to the Assigned Prepay Quantity, the Contract Price shall be (x) the applicable APC Contract Price multiplied by (y) the result of 100% less the Monthly Discount Percentage, and (II) with respect to any Assigned PAYGO Amount, the Contract Price shall be the APC Contract Price.¹

“Contract Quantity” means: (a) during the Gas Delivery Period for each Gas Day and each Delivery Point, the daily quantity of Gas (in MMBtu) shown in Exhibit A for such Delivery Point for the Month in which such Gas Day occurs; and (b) during the Electricity Delivery Period, (i) the Hourly Quantity, if any, for each Hour and each Delivery Point and (ii) the Assigned Prepay Quantity, if any, for each Month.

“Contract Specified Price” has the meaning specified in Exhibit A for each Delivery Point, which Contract Specified Price shall be (x) the Monthly Index Price for each Gas Delivery Point unless Purchaser assigns a fixed price Upstream Supply Contract consistent with the terms of Exhibit G-1 and (y) the Day-Ahead Market Price for each Electricity Delivery Point unless Purchaser assigns a power purchase agreement consistent with Exhibit H.

¹ OHS NTD: “Monthly Discount Percentage” does not appear to be defined. “Monthly Discount” is defined on Exhibit F as a \$[____]/MMBtu. Please confirm the commercial intent for determining the discount for the Contract Price. SM NTD: We have revised all references to refer to Monthly Discount Percentage. This is consistent with more recent transactions where the discount is determined as a percentage of cash flows and is helpful for the purpose of determining payment obligations with respect to fixed price commodities.

“CPT” means Central Daylight Saving Time when such time is applicable and otherwise means Central Standard Time.

“Critical Notice” has the meaning specified in Section 5.2(a)(ii).

“Current Reset Period” has the meaning specified in Exhibit F.

“Day-Ahead Market Price” has the meaning set forth in Exhibit A for each Electricity Delivery Point.

“Default Rate” means, as of any date of determination, the lesser of (a) the sum of (i) the rate of interest per annum quoted in The Wall Street Journal (Eastern Edition) under the “Money Rates” section as the “Prime Rate” for such date of determination, plus (ii) one percent per annum, or (b) if a maximum rate is imposed by applicable Law, such maximum lawful rate.

“Delivering Transporter” means the Transporter delivering Gas at a Delivery Point.

“Delivery Hours” means each Hour beginning at 9:00 a.m. CPT on the Switch Date and ending at the end of the last Hour in the Delivery Period.

“Delivery Period” has the meaning specified in Exhibit F.

“Delivery Point” means (a) during the Gas Delivery Period, the Gas Delivery Point and (b) during the Electricity Delivery Period, the Electricity Delivery Point.

“Delivery Point Premium” means the amount specified in Exhibit A for deliveries to a Delivery Point, as such amount may be adjusted in accordance with this Agreement.

“Disqualified Sale Proceeds” has the meaning specified in Section 7.6(a).

“Disqualified Sale Units” has the meaning specified in Section 7.6(a).

“Electricity” means three-phase, 60-cycle alternating current electric energy, expressed in megawatt hours.

“Electricity Delivery Period” means the period commencing at 9:00 am CPT on the Switch Date and ending as of the last Hour (in LPT) on the last calendar day of the Delivery Period.

“Electricity Delivery Point” has the meaning specified in Section 5.1(c).

“Electricity Product” means Electricity and, to the extent included on an Assignment Schedule, RECs, capacity or other products related to the foregoing; *provided* that the inclusion of any Electricity Product on an Assignment Schedule is subject to the limitations set forth in Exhibit H.

“Execution Date” has the meaning specified in the preamble.

“Federal Tax Certificate” the executed Federal Tax Certificate delivered by Purchaser in the form attached as Exhibit D.

“FERC” means the Federal Energy Regulatory Commission or any successor thereto.

“Firm” means, with respect to the obligations to deliver Gas during the Gas Delivery Period, that either Party may interrupt its performance without liability only to the extent that such performance is prevented for reasons of force majeure; *provided*, however, that during force majeure interruptions, the Party invoking force majeure may be responsible for Imbalance Charges as set forth in Section 5.5 related to its interruption after the nomination is made to the Transporter and until the change in deliveries and/or receipts is confirmed by the Transporter.

“Firm (LD)” means, with respect to the obligation to deliver Electricity, that either Party shall be relieved of its obligations to sell and deliver or purchase and receive without liability only to the extent that, and for the period during which, such performance is prevented by Force Majeure. In the absence of Force Majeure, the Party to which performance is owed shall be entitled to receive from the Party which failed to deliver/receive an amount determined pursuant to Article IV.

“Force Majeure” has the following meanings during the Gas Delivery Period and the Electricity Delivery Period, respectively:

(a) During the Gas Delivery Period, “Force Majeure” means an event or circumstance which prevents one Party from performing its obligations under this Agreement, which event or circumstance was not anticipated as of the Execution Date, which is not within the reasonable control of, or the result of the negligence of, the Claiming Party, and which, by the exercise of due diligence, the Claiming Party is unable to overcome or avoid or cause to be avoided. Force Majeure shall include, but not be limited to, the following: (i) physical events such as acts of God, landslides, lightning, earthquakes, fires, storms or storm warnings, such as hurricanes, which result in evacuation of the affected area, floods, washouts, explosions, breakage or accident or necessity of repairs to machinery or equipment or lines of pipe; (ii) weather-related events affecting an entire geographic region, such as low temperatures which cause freezing or failure of wells or lines of pipe; (iii) interruption and/or curtailment of transportation and/or storage by Transporters (*provided* that, if the affected Party is using interruptible or secondary Firm transportation, only if primary, in-path, Firm transportation is also curtailed by the same event, or if the relevant Transporter does not curtail based on path, if primary Firm transportation is also curtailed); (iv) acts of others such as strikes, lockouts or other industrial disturbances, riots, sabotage, insurrections, wars or acts of terror; (v) governmental actions such as necessity for compliance with any Law promulgated by a Government Agency having jurisdiction; (vi) an event affecting a supplier delivering Gas to Issuer (or to Purchaser on behalf of Issuer) to the extent (A) such Gas was intended for delivery or redelivery to Purchaser under this Agreement, and (B) such event would be considered Force Majeure under this Agreement if it affected Issuer directly; (viii) any invocation of Force Majeure by Prepay LLC under the Prepaid Agreement; and (ix) any invocation of “Force Majeure” by a supplier to J. Aron of Gas to be delivered under the Commodity Sale and Service Agreement (regardless of whether the event for which such Force Majeure was invoked by J. Aron, Prepay LLC or Issuer or would otherwise be considered an event of Force

Majeure under this Agreement if it affected Issuer directly)². Notwithstanding the foregoing, neither Party shall be entitled to the benefit of the provisions of Force Majeure to the extent performance is affected by any or all of the following circumstances: (i) the curtailment of interruptible or secondary Firm transportation unless primary, in-path, Firm transportation is also curtailed; (ii) the Party claiming excuse failed to remedy the condition and to resume the performance of such covenants or obligations with reasonable dispatch; (iii) economic hardship, to include, without limitation, Issuer's ability to sell Gas at a higher or more advantageous price, Purchaser's ability to purchase Gas at a lower or more advantageous price, or a Government Agency disallowing, in whole or in part, the pass through of costs resulting from this Agreement; (iv) the loss of Purchaser's market(s) or Purchaser's inability to use or resell Gas purchased under this Agreement, except, in either case, as provided in the foregoing definition of Force Majeure; or (v) the loss or failure of Issuer's Gas supply or depletion of reserves, except, in either case, as provided in the foregoing definition of Force Majeure. Purchaser shall not be entitled to the benefit of the provisions of Force Majeure to the extent performance is affected by any action taken by Purchaser in its governmental capacity. The Party claiming Force Majeure shall not be excused from its responsibility for Imbalance Charges. In addition to the foregoing and notwithstanding anything to the contrary herein, to the extent that a Gas Assignment Agreement is terminated early, such termination shall constitute Force Majeure with respect to Issuer hereunder until the end of the first Month following the Month in which such early termination occurs.

(b) During the Electricity Delivery Period, "Force Majeure" means an event or circumstance which prevents one Party from performing its obligations under this Agreement, which event or circumstance was not anticipated as of the Execution Date, which is not within the reasonable control of, or the result of the negligence of, the Claiming Party, and which, by the exercise of due diligence, the Claiming Party is unable to overcome or avoid or cause to be avoided. Any invocation of Force Majeure by Prepay LLC under the Prepaid Agreement shall constitute Force Majeure under this Agreement. Force Majeure shall not be based on (i) the loss of Purchaser's markets; (ii) Purchaser's inability economically to use or resell the Commodities purchased hereunder; (iii) the loss or failure of Issuer's supply except if such loss or failure results from curtailment by a Transmission Provider; or (iv) Issuer's ability to sell the Commodities at a higher price. Neither Party may raise a claim of Force Majeure based in whole or in part on curtailment by a Transmission Provider unless (i) such Party has contracted for firm transmission with such Transmission Provider for the Commodities to be delivered to or received at the Delivery Point and (ii) such curtailment is due to "force majeure" or "uncontrollable force" or a similar term as defined under the Transmission Provider's tariff; *provided*, however, that existence of the foregoing factors shall not be sufficient to conclusively or presumptively prove the existence of Force Majeure absent a showing of other facts and circumstances which in the aggregate with such factors establish that Force Majeure as defined in the first sentence of this sub-paragraph (b) has occurred. In addition to the foregoing and notwithstanding anything to the contrary herein, to the extent that a PPA Assignment Agreement is terminated early, such termination shall constitute Force Majeure with respect to Issuer hereunder until the end of the first Month following the Month in which such early termination occurs.

² SM NTD: J. Aron requires the ability to pass through upstream FM given developments in the gas market in recent years.

“Gas” shall mean any mixture of hydrocarbons and noncombustible gases in a gaseous state consisting primarily of methane.

“Gas Assignment Agreement” means an assignment agreement entered into consistent with [Section 8 of Exhibit G-1].

“Gas Day” means a period of twenty-four (24) consecutive hours, beginning at 9:00 a.m. CPT and ending at 8:59 a.m. CPT.

“Gas Delivery Period” means the period commencing at 9:00 am CPT on the first day of the Delivery Period and ending at 8:59:59 am CPT on the earlier of (i) the Switch Date, and (ii) the last Gas Day that commences during the Delivery Period.

“Gas Delivery Point” has the meaning specified in Section 5.1(a).

“Government Agency” means the United States of America, any state thereof, any municipality, or any local jurisdiction, or any political subdivision of any of the foregoing, including, but not limited to, courts, administrative bodies, departments, commissions, boards, bureaus, agencies, or instrumentalities.

“Hour” means each 60-minute period commencing at 9:00 am CPT on the Switch Date through the last hour of the Delivery Period. The term “Hourly” shall be construed accordingly.

“Hourly Quantity” means, (i) with respect to each Delivery Hour, the quantity (in MWh) set forth in Exhibit A for the Month in which such Delivery Hour occurs, and (ii) with respect to any other Hour, zero (0) MWh.

“Imbalance Charges” means any fees, penalties, costs or charges (in cash or in kind) assessed by a Transporter for failure to satisfy the Transporter’s balancing and/or nomination requirements based on such Transporter’s applicable pipeline tariff.

“Indemnifying Party” has the meaning specified in Section 5.3(b).

“Issuer” has the meaning specified in the preamble.

“Issuer Default” has the meaning specified in Section 17.1.

“ISTs” has the meaning set forth in Section 5.1(c).

“Interest Rate Period” has the meaning specified in the Bond Indenture.

“J. Aron” means J. Aron & Company LLC, a New York limited liability company.

“Law” means any statute, law, rule or regulation or any judicial or administrative interpretation thereof having the effect of the foregoing enacted, promulgated, or issued by a Government Agency whether in effect as of the Execution Date or at any time in the future.

“LPT” means the local prevailing time then in effect in the State of California.

“Minimum Discount Percentage” has the meaning specified in Exhibit F.

“MMBtu” means one million British thermal units, which is equivalent to one dekatherm.

“Month” means (a) during the Gas Delivery Period, the period beginning at 9:00 a.m. CPT on the first day of a calendar month and ending at 8:59:59 a.m. CPT on the first day of the next calendar month, and (b) during the Electricity Delivery Period, a calendar month. The term “Monthly” shall be construed accordingly.

“Monthly Discount Percentage” has the meaning specified in Exhibit F.

“Monthly Index Price” has the meaning specified in Exhibit A for each Gas Delivery Point.

“Municipal Utility” means any Person that (i) is a “governmental person” as defined in the implementing regulations of Section 141 of the Code and any successor provision, (ii) owns either or both a gas distribution utility or an electric distribution utility (or provides natural gas or Electricity at wholesale to, or that is sold to entities that provide gas or Electricity at wholesale to, governmental Persons that own such utilities), and (iii) agrees in writing to use the Gas or Electricity purchased by it (or cause such as to be used) for a qualifying use as defined in U.S. Treas. Reg. § 1.148-1(e)(2)(iii).

“MWh” means megawatt-hour.

“NERC Holidays” means New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, and any other day declared a holiday by the North American Electric Reliability Corporation.

“Party” or “Parties” have the meanings specified in the preamble.

“Person” means any individual, corporation, partnership, joint venture, trust, unincorporated organization or Government Agency.

“Potential Remarketing Event” has the meaning specified in Section 3.4(b).

“PPA Assignment Agreement” means, for any Assigned Rights and Obligations, an agreement between Purchaser, J. Aron and an APC Party in the form attached hereto as Attachment 2 to Exhibit H (with such changes as may be mutually agreed upon by Purchaser, J. Aron and the APC Party, each in its sole discretion).

“Prepaid Agreement” means the Amended & Restated Prepaid Commodity Sales Agreement, dated as of [____], 2024, by and between Issuer and Prepay LLC.

“Prepay Fixed Price” means \$[____]/MMBtu during the Gas Delivery Period and \$[____]/MWh during the Electricity Delivery Period, which are the fixed prices under the Buyer Swap (as defined in the Prepaid Agreement).

“Prepay LLC” means Aron Energy Prepay 33 LLC, a Delaware limited liability company.

“Primary Electricity Delivery Point” has the meaning specified in Section 5.1(c).

“Primary Gas Delivery Point” has the meaning specified in Section 5.1(a).

“Priority Commodities” means the Contract Quantity of Commodities to be purchased by Purchaser under this Agreement, together with Commodities that (i) Purchaser is obligated to take under a long-term agreement, which Commodities either have been purchased (or, with respect to Gas, has been produced from Gas reserves in the ground which reserves were purchased) by Purchaser or a joint action agency using the proceeds of bonds, notes, or other obligations, the interest on which is excluded from income for federal income tax purposes pursuant to a long-term prepaid gas purchase agreement, or (ii) with respect to Electricity, is generated using capacity that was constructed using the proceeds of bonds, notes, or other obligations, the interest on which is excluded from income for federal income tax purposes.

“Project Participant” has the meaning specified in the Bond Indenture.

“Purchaser” has the meaning specified in the preamble.

“Purchaser Default” has the meaning specified in Section 17.2.

“Purchaser’s Statement” has the meaning specified in Section 14.1(a).

“Qualifying Use Requirements” means, with respect to any Commodity delivered under this Agreement, such Commodity is used (i) for a “qualifying use” as defined in U.S. Treas. Reg. § 1.148-1(e)(2)(iii), (ii) in a manner that will not result in any “private business use” within the meaning of Section 141 of the Code, and (iii) in a manner that is consistent with the Federal Tax Certificate attached hereto as Exhibit D.

“Rating Agency” has the meaning specified in the Bond Indenture.

“Re-Pricing Agreement” means the Amended & Restated Re-Pricing Agreement, dated as of the Bond Closing Date, by and between Issuer and Prepay LLC.

“Real-Time Market Price” has the meaning set forth in Exhibit A for each Electricity Delivery Point.

“RECs” means “renewable energy credits,” a certificate of proof associated with the generation of electricity from an eligible renewable energy resource, which certificate is issued through the accounting system established by the California Energy Commission pursuant to the California Renewable Energy Resources Act, including the California Renewables Portfolio Standard Program, Article 16 of Chapter 2.3, as implemented and amended from time to time, or

any successor law, evidencing that one (1) MWh of energy was generated and delivered from such eligible renewable energy resource. Such certificate is a tradable environmental commodity (also known as a “green tag”) for which the owner of the REC can prove that it has purchased renewable energy.

“Receiving Transporter” means the Transporter taking Gas at a Delivery Point, or absent such Transporter, the Transporter delivering Gas at such Delivery Point.

“Reduced Hourly Quantity” has the meaning specified in Exhibit H.

“Remarketing Election Deadline” means, for any Reset Period, the last date and time by which the Purchaser may provide a Remarketing Election Notice, which shall be 4:00 p.m. LPT on the 10th day of the Month (or, if such day is not a Business Day, the next succeeding Business Day) prior to the first delivery Month of a Reset Period with respect to which a Potential Remarketing Event has occurred.

“Remarketing Election Notice” has the meaning specified in Section 3.4(b).

“Replacement Electricity” means Electricity purchased by Purchaser to replace any Shortfall Quantity; *provided* that, such Electricity is purchased for delivery in the Delivery Hour to which such Shortfall Quantity relates.

“Replacement Electricity Price” means, with respect to any Shortfall Quantity for Electricity, the price (in \$/MWh) at which Purchaser, acting in a Commercially Reasonable manner, purchases Replacement Electricity in respect of such Shortfall Quantity, including (i) costs reasonably incurred by Purchaser in purchasing such substitute Electricity, and (ii) additional transmission charges, if any, reasonably incurred by Purchaser to the Delivery Point. The Replacement Electricity Price for any Shortfall Quantity shall not include any administrative or other internal costs incurred by Purchaser and shall be limited to a price that is Commercially Reasonable with respect to the timing and manner of purchase given (i) the amount of notice provided by Issuer, (ii) the immediacy of Purchaser’s Electricity needs or redelivery obligations, (iii) the quantities involved, (iv) the anticipated length of failure by Issuer, (v) Purchaser’s obligation to mitigate Issuer’s damages pursuant to Section 4.1(d), and (vi) any other relevant factors. In no event shall the Replacement Electricity Price include any penalties, ratcheted demand or similar charges, nor shall Purchaser be required to utilize or change its utilization of its owned or controlled assets or market positions to minimize Issuer’s liability.

“Replacement Gas” means Gas purchased by Purchaser to replace any Shortfall Quantity; *provided* that, such Gas (i) is purchased for delivery on the Gas Day to which such Shortfall Quantity relates, (ii) is purchased for delivery in the Month such Shortfall Quantity arises, or (iii) relates to a Shortfall Quantity that arose on a Gas Day that commences on any of the last seven Business Days of a Month, and is purchased for delivery in the Month following the Month in which such Shortfall Quantity arose.

“Replacement Gas Price” means, with respect to any Shortfall Quantity for Gas, the price (in \$/MMBtu) at which Purchaser, acting in a Commercially Reasonable manner, purchases Replacement Gas for delivery at the Delivery Point, subject to the final sentence of this definition, in respect of such Shortfall Quantity, including (i) costs reasonably incurred by

Purchaser in purchasing such substitute Gas (including, but not limited to, any fees, charges, penalties or other costs payable by Purchaser as a result of purchasing such substitute Gas that must be delivered to Purchaser), and (ii) any transportation costs (including storage withdrawal and injection costs, which may include liquefaction and vaporization costs for stored liquefied natural gas). The Replacement Gas Price for any Shortfall Quantity shall not include any administrative or other internal costs incurred by Purchaser and shall be limited to a price that is Commercially Reasonable with respect to the timing and manner of purchase given (i) what constitutes a price reasonable for the delivery area, (ii) the amount of notice provided by Issuer, (iii) the immediacy of Purchaser's Gas consumption needs, as applicable, (iv) the quantities involved, (v) the anticipated length of failure by Issuer and (vi) Purchaser's obligation to mitigate Issuer's damages pursuant to Section 4.1(d). In no event shall the Replacement Gas Price include any penalties or similar charges; *provided* that, Imbalance Charges may be recovered under Section 5.5. If Purchaser is unable to purchase Replacement Gas at the Delivery Point through the exercise of Commercially Reasonable Efforts, then Replacement Gas may be purchased at PG&E Citygate in accordance with the foregoing; provided that that the Replacement Gas Price shall be reduced by any costs that Purchaser avoids by receiving Gas at PG&E Citygate rather than the Delivery Point.

“Reset Period” means each “Reset Period” under the Re-Pricing Agreement.

“Reset Period Notice” has the meaning specified in Section 3.4(a).

“Schedule”, “Scheduled” or “Scheduling” means the actions of Issuer, Purchaser and/or their designated representatives, including each Party's Transmission Providers, if applicable, of notifying, requesting and confirming to each other the quantity of Commodity to be delivered during any given portion of the Delivery Period at a specified Delivery Point.

“Secondary Electricity Delivery Point” has the meaning specified in Section 5.1(c).

“Shortfall Quantity” has the meaning specified in Section 4.1(a).

“Switch Date” mean such date as determined under the Prepaid Agreement pursuant to the procedure described in Section 3.3 below.

“Transmission Provider(s)” means any entity or entities transmitting or transporting Electricity on behalf of Issuer or Purchaser to or from the Delivery Point.

“Transporter(s)” means all Gas gathering or pipeline companies, or local distribution companies acting in the capacity of a transporter, transporting Gas for Issuer or Purchaser upstream or downstream, respectively, of the Delivery Point.

“Trustee” means [Computershare], and its successors as Trustee under the Bond Indenture.

“Upstream Supply Contract” has the meaning specified in Exhibit G-1.

“Utility Revenues” means all charges received for, and all other income and receipts derived by Purchaser from, the operation of Purchaser's utility system, or arising from

Purchaser's utility system, including income derived from the sale or use of electric energy generated, transmitted, or distributed by any facilities of Purchaser's utility system, together with any receipts derived from the sale of any property pertaining to Purchaser's utility system or incidental to the operation of Purchaser's utility system or from any services performed by Purchaser in connection with or incidental to Purchaser's utility system, or from any other source whatsoever directly or indirectly derived from Purchaser's utility system, but exclusive in every case of any moneys derived from the levy or collection of taxes upon any taxable property within the jurisdictional boundaries of Purchaser.

“Voided Remarketing Election Notice” has the meaning specified in Section 3.4(b).

Section 1.2 Definitions; Interpretation. References to “Articles”, “Attachments”, “Sections”, “Schedules” and “Exhibits” shall be to Articles, Attachments, Sections, Schedules and Exhibits, as the case may be, of this Agreement unless otherwise specifically provided. Section headings in this Agreement are included herein for convenience of reference only and shall not constitute a part of this Agreement for any other purpose or be given any substantive effect. Any of the terms defined herein may, unless the context otherwise requires, be used in the singular or the plural, depending on the reference. The use herein of the word “include” or “including”, when following any general statement, term or matter, shall not be construed to limit such statement, term or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not nonlimiting language (such as “without limitation” or “but not limited to” or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that fall within the broadest possible scope of such general statement, term or matter. Any reference herein to any agreement or document includes all amendments, supplements or restatements to and of such agreement or document as may occur from time to time.

ARTICLE II EXECUTION DATE AND DELIVERY PERIOD; NATURE OF COMMODITY PROJECT

Section 2.1 Execution Date; Delivery Period. Unless this Agreement is terminated pursuant to Article XVII, delivery of Commodities under this Agreement shall commence and continue for the Delivery Period.

Section 2.2 Nature of Commodity Project. Purchaser acknowledges and agrees that Issuer will meet its obligations to provide Commodities to Purchaser under this Agreement exclusively through its purchase of long-term supplies of Commodities from Prepay LLC pursuant to the Commodity Project and that Issuer is financing its purchase of such long-term supplies of Commodities through the issuance of the Bonds.

Section 2.3 Pledge of this Agreement. Purchaser acknowledges and agrees that Issuer will pledge its right, title and interest under this Agreement and the revenues to be received under this Agreement to secure Issuer's obligations under the Bond Indenture.

ARTICLE III SALE AND PURCHASE

Section 3.1 Sale and Purchase of Commodities.

(a) On each Gas Day during the Gas Delivery Period, Issuer agrees to sell and deliver or cause to be delivered to Purchaser, and Purchaser agrees to purchase and take or cause to be taken from Issuer, in each case, on a Firm basis, the Contract Quantity of Gas pursuant to the terms and conditions set forth in this Agreement, including the limitations set forth herein relating to any portion of the Contract Quantity of Gas for which a Gas Assignment Agreement is in effect.

(b) During each Hour during the Electricity Delivery Period, Issuer agrees to sell and deliver or cause to be delivered to Purchaser, and Purchaser agrees to purchase and take or cause to be taken from Issuer, in each case, on a Firm (LD) basis, the Hourly Quantity of Electricity, if any, pursuant to the terms and conditions set forth in this Agreement. Additionally, during each Month of the Electricity Delivery Period, Issuer agrees to sell and deliver or cause to be delivered to Purchaser, and Purchaser agrees to purchase and take or cause to be taken from Issuer the Assigned Prepay Quantity, if any, of Electricity subject to the terms and conditions of this Agreement including the limitations set forth herein relating to any portion of the Contract Quantity of Electricity for which a PPA Assignment Agreement is in effect.

Section 3.2 Pricing.

(a) For each MMBtu of Gas and MWh of Electricity (as applicable) delivered to Purchaser at the Delivery Point, Purchaser shall pay Issuer the applicable Contract Price.

(b) The Contract Price for Assigned Electricity is inclusive of any amounts due in respect of Assigned RECs and any other Assigned Product.

(c) In addition to the Monthly Discount Percentage applicable to deliveries of the Contract Quantities to Purchaser hereunder, Issuer shall provide such Annual Refund to Purchaser as may be available for distribution by Issuer pursuant to [Section 5.10(b)] of the Bond Indenture. Such Annual Refund, if any, shall be credited to the next amount due from Purchaser following the release of funds for such purpose to Issuer under the terms of the Bond Indenture. In determining the amount of such Annual Refund, if any, to be paid to Purchaser, Issuer may reserve such funds as may be required under the terms of the Bond Indenture or as Issuer deems reasonably necessary and appropriate, including but not limited to amounts required to fund or maintain the Minimum Discount Percentage for any future Reset Period, to fund or maintain any rate stabilization or working capital reserve, to reserve or account for unfunded liabilities and expenses, including future sinking fund or other principal amortization of the Bonds, or for other costs of the Commodity Project. After reserving such funds, Issuer shall allocate such refund to Purchaser.

Section 3.3 Switch Date to Commence Electricity Deliveries; Assignment of Agreements. On the Switch Date, deliveries of Gas hereunder will cease, and deliveries of Electricity will commence. Issuer has the right under the Prepaid Agreement to designate the Switch Date and modify a previously designated Switch Date to a later date by delivering written notice to Prepay LLC, *provided* that (i) the Switch Date may occur no earlier than July 1, 2028, (ii) the Switch Date must begin on the first day of a Month that commences not earlier than (A) six (6) Months after such notice is delivered if deliveries will be to the Primary Electricity Delivery

Point or (B) twelve (12) Months after such notice is delivered if deliveries will be to a Secondary Electricity Delivery Point, Alternate Electricity Delivery Point or Assigned Delivery Point, (iii) any notice modifying a previously designated Switch Date must be delivered no later than twelve Months prior to the date the Switch Date otherwise would have occurred, and (iv) the Switch Date may be modified to an earlier date only once but may be modified to a later date from time to time subject to the other requirements set forth herein. Purchaser shall have the right to require Issuer to modify the Switch Date in accordance with the Prepaid Agreement, and Issuer agrees that it shall act only at the direction of Purchaser in making any elections regarding the Switch Date.

Section 3.4 Reset Period Remarketing.

(a) Reset Period Notice. For each Reset Period, Issuer shall provide to Purchaser, at least ten (10) days prior to the Remarketing Election Deadline, formal written notice setting forth (i) the duration of such Reset Period, (ii) the Estimated Available Discount Percentage (as defined in the Re-Pricing Agreement) for such Reset Period, and (iii) the applicable Remarketing Election Deadline (a “Reset Period Notice”). Issuer may thereafter update such notice at any time prior to the Remarketing Election Deadline and may extend the Remarketing Election Deadline in its sole discretion in any such update.

(b) Remarketing Election. If the Reset Period Notice (or any update thereto) indicates that the Available Discount Percentage in such notice is not at least equal to the Minimum Discount Percentage for that Reset Period, then: (i) a “Potential Remarketing Event” shall be deemed to exist, and (ii) Purchaser may, not later than the Remarketing Election Deadline, issue a written notice in the form attached hereto as Exhibit C (a “Remarketing Election Notice”) to Issuer, Prepay LLC and the Trustee electing for all of Purchaser’s Commodities that would otherwise be delivered hereunder to be remarketed during the applicable Reset Period; *provided*, however, if the actual Available Discount Percentage, as finally determined under the Re-Pricing Agreement, is equal to or greater than the Minimum Discount Percentage, then Issuer may, in its sole discretion, elect by written notice to Purchaser to treat such Remarketing Election Notice as void (a “Voided Remarketing Election Notice”). If Purchaser issues a valid Remarketing Election Notice (other than a Voided Remarketing Election Notice), then Purchaser shall have no rights or obligations to take any Commodities hereunder or to receive any Annual Refund attributable to the applicable Reset Period.

(c) Final Determination of Available Discount Percentage. The Parties acknowledge and agree that the final Available Discount Percentage for any Reset Period following the Current Reset Period will be determined on the applicable Re-Pricing Date (as defined in the Re-Pricing Agreement), and that such Available Discount Percentage may differ from the estimate or estimates of such Available Discount Percentage provided to Purchaser prior to the applicable Remarketing Election Deadline; *provided* that the Available Discount Percentage for any Reset Period will not be less than the lesser of (i) the last Estimated Available Discount Percentage (as defined in the Re-Pricing Agreement) set forth in the Reset Period Notice (or any update thereof) sent by Issuer, and (ii) the Minimum Discount Percentage applicable to such Reset Period.

(d) Resumption of Deliveries. Notwithstanding the issuance of any Remarketing Election Notice for a Reset Period, Purchaser will remain obligated to purchase the Contract Quantities hereunder for each subsequent Reset Period, unless Purchaser issues a new valid Remarketing Election Notice (other than a Voided Remarketing Election Notice) for any such Reset Period in accordance with Section 3.4(d).

(e) Reduction of Contract Quantity. The Parties recognize and agree that the Contract Quantity may be reduced in a Reset Period pursuant to the re-pricing methodology described in the Re-Pricing Agreement if necessary to achieve a successful remarketing of the Bonds. The Parties agree further that if, pursuant to the Re-Pricing Agreement, Issuer and the Calculation Agent (as defined therein) determine in connection with the establishment of any new Reset Period that: (i) such Reset Period will be the final Reset Period and (ii) such Reset Period will end prior to the end of the original Delivery Period, then (A) Issuer will notify Purchaser, (B) the Delivery Period will be deemed to be modified so that it ends at the end of such Reset Period, and (C) the Contract Quantity for the last Month in such Reset Period may be reduced as provided in the Re-Pricing Agreement.

ARTICLE IV FAILURE TO DELIVER OR TAKE COMMODITIES

Section 4.1 Issuer's Failure to Deliver the Contract Quantity (Not Due to Force Majeure).

(a) If, on any Gas Day during the Gas Delivery Period or for any Delivery Hour during the Electricity Delivery Period, Issuer breaches its obligation to deliver all or any portion of the Contract Quantity at any Delivery Point pursuant to the terms of this Agreement, then the portion of the Contract Quantity that Issuer failed to deliver shall be a "Shortfall Quantity" and Purchaser shall exercise Commercially Reasonable Efforts to purchase Replacement Gas (during the Gas Delivery Period) or Replacement Electricity (during the Electricity Delivery Period).

(b) To the extent Purchaser actually purchases Replacement Gas (during the Gas Delivery Period) or Replacement Electricity (during the Electricity Delivery Period) with respect to any Shortfall Quantity, then Issuer shall pay to Purchaser the result determined by the following formula:

$$P = Q \times (RP - CP + AF)$$

Where:

P = The amount payable by Issuer under this Section 4.1(b);

Q = The quantity of Replacement Gas or Replacement Electricity Purchased;

RP = The Replacement Gas Price or Replacement Electricity Price, as applicable;

CP = The Contract Price that would have applied to such Commodity;
and

AF = The Administrative Fee.

Notwithstanding the foregoing, in a case where Project Participant actually purchases Replacement Electricity (during the Electricity Delivery Period) with respect to any Shortfall Quantity at a Secondary Electricity Delivery Point, Issuer shall pay to Purchaser the result of the quantity of Replacement Electricity purchased *multiplied by* the Day-Ahead Market Price applicable to the Delivery Hour and the Delivery Point for which the Shortfall Quantity arose.³

(c) Purchaser shall monitor nominations and deliveries of Commodities to be delivered to Purchaser at each Delivery Point and shall promptly notify Issuer upon becoming aware that such nominations or deliveries might result in a Shortfall Quantity with respect to such Delivery Point.

(d) Purchaser shall exercise Commercially Reasonable Efforts to mitigate Issuer's damages paid hereunder; *provided* that, such Commercially Reasonable Efforts shall not require Purchaser to utilize or change its utilization of its owned or controlled assets or market positions to minimize Issuer's liability.

(e) Imbalance Charges for Gas shall not be recovered under this Section 4.1, but rather in accordance with Section 5.5.

Section 4.2 Purchaser's Failure to Take the Contract Quantity (Not Due to Force Majeure). If, on any Gas Day during the Gas Delivery Period or for any Delivery Hour during the Electricity Delivery Period, Purchaser breaches its obligation to take all or any portion of the Contract Quantity at any Delivery Point pursuant to the terms of this Agreement, then Purchaser shall remain obligated to pay Issuer the Contract Price for the Contract Quantity. Issuer shall credit to Purchaser's account any net revenues Issuer may receive from Prepay LLC under the Prepaid Agreement in connection with the ultimate sale of any such Commodities by Prepay LLC to other Municipal Utilities, up to the Contract Price.

Section 4.3 Sole Remedies. Except with respect to the payment of Imbalance Charges pursuant to Section 5.5, the remedies set forth in this Article IV shall be each Party's sole and exclusive remedies for any failure by the other Party to deliver or take Commodities, as applicable, pursuant to this Agreement.

Section 4.4 Limitations. Notwithstanding anything herein to the contrary, neither Party shall have any liability or other obligation to the other under this Article IV with respect to a failure to take or deliver any portion of the Contract Quantity for which a Gas Assignment Agreement or a PPA Assignment Agreement is in effect.

³ OHS NTD: To discuss calculation for the Secondary Electricity Delivery Point case to ensure cash flows work for the bonds.

ARTICLE V
TRANSPORTATION AND DELIVERY; COMMUNICATIONS

Section 5.1 Delivery Point.

(a) All Gas delivered under this Agreement shall be delivered and received (i) at the delivery point specified in Exhibit A (the “Primary Gas Delivery Point”), or (ii) to any other point (an “Alternate Gas Delivery Point”) that has been mutually agreed by Purchaser and Issuer (the Primary Gas Delivery Point or Alternate Gas Delivery Point, if specified, each being a “Gas Delivery Point”).

(b) The Monthly Index Price for each Alternate Gas Delivery Point, as applicable, shall be the price mutually agreed and identified by the Parties, or if no such price is identified for such Alternate Gas Delivery Point, the price shall be the Monthly Index Price for such Alternate Gas Delivery Point, as applicable, specified in Exhibit A for the Primary Gas Delivery Point from which quantities are being shifted to such Alternate Gas Delivery Point.

(c) All Electricity delivered under this Agreement shall be Scheduled (i) at the delivery point set forth in Exhibit A (the “Primary Electricity Delivery Point”), (ii) at one of the secondary delivery points set forth in Exhibit A with six (6) Months’ prior notice from Purchaser (the “Secondary Electricity Delivery Points”), (iii) to any other point (an “Alternate Electricity Delivery Point”) that has been mutually agreed by Purchaser and Issuer or selected by Purchaser pursuant to the following sentence or (iv) any applicable Assigned Delivery Point specified in an Assignment Schedule with respect to Assigned Electricity (the Primary Electricity Delivery Point, Secondary Electricity Point, Alternate Electricity Delivery Point or Assigned Delivery Point, if specified, each being an “Electricity Delivery Point”). Upon twelve (12) Months’ prior written notice to Issuer, Purchaser may select the California-Oregon Border as an Alternate Electricity Delivery Point; *provided* that, such selection must be confirmed by Prepay LLC pursuant to Section 5.1(c) of the Prepaid Agreement. Delivery of Electricity to Purchaser at the Primary Electricity Delivery Point and the Secondary Electricity Delivery Points specified in Exhibit A shall be facilitated through submission of Inter-Scheduling Coordinator Trades (“ISTs”). Purchaser shall designate a scheduling coordinator in the CAISO market for this purpose as specified in Exhibit G-2.

(d) The Day-Ahead Market Price for each Alternate Electricity Delivery Point, as applicable, shall be the price mutually agreed and identified by the Parties, or if no such price is identified for such Alternate Electricity Delivery Point, the price shall be the Day-Ahead Market Price for such Alternate Electricity Delivery Point, as applicable, specified in Exhibit A for the Primary Electricity Delivery Point from which quantities are being shifted to such Alternate Electricity Delivery Point.

Section 5.2 Responsibility for Transportation; Permits.

(a) Gas.

(i) Issuer shall obtain or cause to be obtained and pay for or cause payment to be made for all processing, gathering, and transportation necessary for delivery of the Contract Quantity to each Delivery Point. Purchaser shall obtain or cause to be obtained and pay

for or cause payment to be made for all transportation necessary to receive the Contract Quantity at each Delivery Point and to transport the Contract Quantity from each Delivery Point.

(ii) Should either Party receive an operational flow order or other order or notice from a Transporter requiring action to be taken in connection with the Gas flowing under this Agreement (a “Critical Notice”), such Party shall notify or cause the notification of the other Party of the Critical Notice and provide or cause to be provided to the other Party a copy of same by electronic mail, or facsimile if requested, within a Commercially Reasonable timeframe. The Parties shall exercise Commercially Reasonable Efforts required by the Critical Notice within the time prescribed by the applicable Transporter. Each Party shall, in accordance with the procedures set forth in Section 18.1, indemnify, defend and hold harmless the other Party from any Claims associated with any Critical Notice (i) of which the indemnifying Party failed to give the indemnified Party the notice required under this Agreement or (ii) under which the indemnifying Party failed to take the action required by the Critical Notice within the time prescribed; *provided* that the notice from the indemnified Party was timely delivered.

(b) Electricity. Issuer shall arrange and be responsible for transmission service of Hourly Quantity to the Delivery Point and shall Schedule or arrange for Scheduling services with its Transmission Providers, to deliver Electricity to the Delivery Point. Purchaser shall arrange and be responsible for transmission service at and from the Delivery Point and shall Schedule or arrange for Scheduling services with its Transmission Providers to receive Electricity at the Delivery Point.

Section 5.3 Title and Risk of Loss.

(a) Title to Commodities delivered under this Agreement and risk of loss shall pass from Issuer to Purchaser at the Delivery Point; *provided* that the transfer of title and risk of loss for all Assigned Gas and Assigned Electricity shall be in accordance with the applicable Gas Assignment Agreement or PPA Assignment Agreement while any such assignment agreement is in effect; *provided* furthermore that, notwithstanding anything to the contrary herein, no indemnity obligations shall apply as between the Parties with respect to any Assigned Product or Assigned Gas (as defined in a Gas Assignment Agreement).

(b) With respect to Gas, as between the Parties, Issuer shall be deemed to be in exclusive control and possession of the Gas delivered under this Agreement, and responsible for any damage or injury caused thereby, prior to the time such Gas has been delivered to Purchaser at the Delivery Point. After delivery of Gas to Purchaser at the Delivery Point, Purchaser shall be deemed to be in exclusive control and possession thereof and responsible for any injury or damage caused thereby. Each Party (each, an “Indemnifying Party”) assumes all liability for and, subject to the provisions of Section 18.1, shall indemnify, defend and hold harmless the other Party from any Claims, including death of Persons, arising from any act or incident occurring when title to Gas is vested in the Indemnifying Party.

Section 5.4 Daily Flow Rates. For Gas other than any portion of the Contract Quantity of Gas for which a Gas Assignment Agreement is in effect, for which flow rates will be addressed in the applicable Gas Assignment Agreement, Issuer shall nominate, Schedule and deliver, and Purchaser shall nominate, Schedule and take, the Contract Quantity of Gas during the Gas Delivery

Period at each Delivery Point in accordance with standard Firm service requirements of the Receiving Transporter and Delivering Transporter at such Delivery Point, unless otherwise agreed by the Parties; *provided* that, for the avoidance of doubt, neither Party in any case shall be obligated to incur additional costs by procuring additional services, running imbalances or taking any other actions to accommodate non-standard scheduling requirements of the other Party.

Section 5.5 Imbalances. The Parties shall use Commercially Reasonable Efforts to avoid the imposition of any Imbalance Charges. If Purchaser or Issuer receives an invoice from a Transporter that includes Imbalance Charges related to the obligations of either Party under this Agreement, the Parties shall determine the validity as well as the cause of such Imbalance Charges. If the Imbalance Charges were incurred as a result of Purchaser's taking of quantities of Gas greater than or less than the Contract Quantity at any Delivery Point, then Purchaser shall pay for such Imbalance Charges or reimburse Issuer for such Imbalance Charges paid by Issuer. If the Imbalance Charges were incurred as a result of Issuer's delivery of quantities of Gas greater than or less than the Contract Quantities at any Delivery Point, then Issuer shall pay for such Imbalance Charges or reimburse Purchaser for such Imbalance Charges paid by Purchaser. Additionally, notwithstanding anything to the contrary in this Section 5.5, Issuer shall have no liability for Imbalance Charges in respect of any Gas required to be scheduled or delivered under an Upstream Supply Contract (as defined in the Prepaid Agreement).

Section 5.6 Communications Protocol. Purchaser and Issuer shall comply with the communications protocols set forth in Exhibit G-1 for Gas deliveries and Exhibit G-2 for Electricity deliveries; *provided* that, for any portion of the Contract Quantity for which a Gas Assignment Agreement or a PPA Assignment Agreement is in effect, Scheduling and shall be in accordance with the applicable assignment agreement.

Section 5.7 Gas Quality and Measurement. Purchaser shall not be required to accept Gas delivered by Issuer that does not meet the pressure, quality and heat content requirements of the Receiving Transporter as detailed in the applicable pipeline tariff. Purchaser's sole and exclusive remedy against Issuer with respect to any Gas that fails to meet such pressure, quality and heat content requirements shall be the right to reject such non-conforming Gas and to receive payment under Article IV. If such rejected Gas meets the pressure, quality and heat content requirements of the Delivering Transporter, but does not meet such requirements of the Receiving Transporter, any such rejection by Purchaser and failure to deliver by Issuer shall be deemed to be excused by Force Majeure. For the avoidance of doubt, the provisions of Article XI shall apply to any such event of Force Majeure. If such rejected Gas does not meet such requirements of either the Receiving Transporter or the Delivering Transporter, Issuer shall be deemed to have failed to deliver any such Gas that is properly rejected. With respect to any measurement of Gas delivered or received under this Agreement at any Delivery Point, the measurement of such Gas (including the definition of Btu used in making such measurement) by the operator of such Delivery Point shall be deemed to be conclusive; *provided*, however, if the operator of such Delivery Point revises its measurement statements for Gas, such revision shall be effective as the measurement of Gas for the purposes of this Agreement and may be corrected pursuant to Section 14.5. Notwithstanding the foregoing, but without prejudice to any right of Project Participant to reject Assigned Gas under and as defined in a Gas Assignment Agreement, measurement of Assigned Gas shall be as set forth in the applicable Upstream Supply Contract and Issuer shall not have any liability for the failure of any Assigned Gas to meet any applicable quality requirements.

Section 5.8 Limitations. Notwithstanding anything to the contrary herein, neither Party shall have any liability under this Article V with respect to any portion of the Contract Quantity for which a Gas Assignment Agreement or a PPA Assignment Agreement is in effect.

ARTICLE VI GAS ASSIGNMENT AGREEMENTS

Section 6.1 Upstream Supply Contract Assignments. Purchaser may assign and J. Aron may agree to assume a portion of Purchaser's rights and obligations under an Upstream Supply Contract consistent with the terms set forth in Exhibit G-1.

Section 6.2 Adjustments to Contract Quantity. In connection with the execution of a Gas Assignment Agreement with an Assigned Contract Price (as defined in the relevant Gas Assignment Agreement) that is a fixed price, Issuer shall revise Exhibit A to reflect appropriate adjustments to the Contract Quantity consistent with Section 8.3 of Exhibit G-1; provided that such adjustments shall be reversed consistent with Section 8.3 of Exhibit G-1 following an early termination of the relevant Assignment Period.⁴

ARTICLE VII USE OF COMMODITIES

Section 7.1 Tax Exempt Status of the Bonds. Purchaser acknowledges that the Bonds will be issued with the intention that the interest thereon will be exempt from federal taxes under Section 103 of the Code. Accordingly, Purchaser agrees that it will (a) provide such information with respect to its utility system as may be requested by Issuer in order to establish the tax-exempt status of the Bonds, and (b) act in accordance with such written instructions as Issuer may provide from time to time in order to maintain the tax-exempt status of the Bonds. Purchaser further agrees that it will not at any time take any action, or fail to take any action, that would adversely affect the tax-exempt status of the Bonds.

Section 7.2 Priority Commodities. Purchaser agrees to take the Contract Quantities to be delivered under this Agreement (a) in priority over and in preference to all other Commodities available to Purchaser that are not Priority Commodities; and (b) on at least a *pari passu* and non-discriminatory basis with other Priority Commodities.

Section 7.3 Assistance with Sales to Third Parties. If, notwithstanding Purchaser's compliance with Section 7.1, Purchaser does not require or is unable to receive all or any portion of the Contract Quantity that it is obligated to purchase under this Agreement as a result of (i) decreased Gas requirements due to reduced generation requirements during the Gas Delivery Period, (ii) decreased demand by Purchaser's retail customers or (iii) a change in Law, Issuer shall, upon reasonable notice from Purchaser, issue a remarketing notice in the form attached to Exhibit G-1 or Exhibit G-2, as applicable, use Commercially Reasonable Efforts, to the extent permitted in the Prepaid Agreement, to arrange for the sale of such quantities by Prepay LLC (A) to another

⁴ OHS NTD: To clarify – the current definition refers to Exhibit H, which is for Electricity only. The term is separately defined in the Gas Communications Protocol draft attached as Exhibit G-1. Is this meant to reference that definition? SM NTD: Thank you for clarifying. We have updated the definition of Assignment Period to pick up Assignment Periods under a Gas Assignment Agreement or PPA Assignment Agreement, as applicable.

Municipal Utility, or (B) if necessary, to another purchaser; *provided* that any remarketing notice issued under clause (iii) above shall constitute a Structural Remarketing Notice (as defined in the Prepaid Agreement) and shall be subject to the requirements set forth in the Prepaid Agreement. Purchaser shall remain obligated to pay Issuer the Contract Price for any portion of the Contract Quantity for which it requests remarketing pursuant to this Section 7.3, *provided* that, if Issuer succeeds in arranging such a sale by Prepay LLC, Issuer shall credit against the amount owed by Purchaser for such Contract Quantities the amount received by Issuer from Prepay LLC for such sales less all directly incurred costs or expenses, including but not limited to remarketing administrative charges paid to Prepay LLC under the Prepaid Agreement, but in no event shall the amount of such credit be more than the Contract Price.

Section 7.4 Qualifying Use. Without limiting Purchaser's other obligations under this Article VII, Purchaser agrees that, subject to Section 7.5, it will use all of the Commodities purchased under this Agreement in compliance with the Qualifying Use Requirements. Purchaser agrees that it will provide such additional information, records and certificates as Issuer may reasonably request to confirm Purchaser's compliance with this Section 7.4.

Section 7.5 Remediation. The Parties acknowledge that Purchaser may at times need to remarket, or inadvertently remarket, Commodities received hereunder in a manner that does not comply with Qualifying Use Requirements due to daily and hourly fluctuations in Purchaser's Commodity needs. To the extent Purchaser does so, Purchaser shall (a) exercise Commercially Reasonable Efforts to use any Disqualified Sale Proceeds of such remarketing to purchase Commodities (other than Priority Commodities) that Purchaser uses in compliance with the Qualifying Use Requirements and (b) reserve funds in an amount equal to any Disqualified Sale Proceeds until such Disqualified Sale Proceeds are remediated or transferred to the Trustee pursuant to Section 7.6(c) below.

Section 7.6 Semi-Annual Report; Ledger Entries; Redemption.

(a) To track compliance with the requirements of Section 7.5, Purchaser will provide a semi-annual report to Issuer (delivered not later than the fifteenth (15th) day of each April and October until the end of the Delivery Period) showing the following (each, a "Semi-Annual Report"): the total quantity of proceeds from sales of Commodities received hereunder that (i) were sold by Purchaser to any Person other than a Municipal Utility and (ii) have not been remediated by Purchaser by applying such proceeds to purchase Gas or Electricity that is used in compliance with the Qualifying Use Requirements (such portion as units, "Disqualified Sale Units" and such portion as value received, "Disqualified Sale Proceeds");

(b) Issuer will cause such unremediated Disqualified Sale Proceeds and the associated Disqualified Sale Units to be added to the appropriate remarketing ledgers maintained by Prepay LLC under the Prepaid Agreement, with the ledgers entries dated as of the end of the first month of the relevant six (6) Month period; and

(c) Purchaser shall transfer (to the extent such unremediated Disqualified Sales Proceeds and associated Disqualified Sale Units remain reflected on the appropriate remarketing ledgers under Section 7.6(a) at the time such transfer is required by this Section 7.6(c)) any such unremediated Disqualified Sale Proceeds and any other required funds (i.e., all additional funds

necessary for such redemption) to the Trustee at least 95 days prior to the second anniversary of the date on which such unremediated Disqualified Sale Proceeds and the associated Disqualified Sale Units were reflected on the appropriate remarketing ledgers under (a) above, with such funds to be deposited in the Debt Service Account (as defined in the Bond Indenture) and applied to the redemption of Bonds as directed by Issuer and approved by Bond Counsel (as defined in the Bond Indenture) as preserving the tax-exempt status of the Bonds.

ARTICLE VIII REPRESENTATIONS AND WARRANTIES; ADDITIONAL COVENANTS

Section 8.1 Representations and Warranties of Issuer. As a material inducement to entering into this Agreement, each Party, with respect to itself, hereby represents and warrants to the other Party as of the Execution Date as follows:

(a) For Issuer as the representing Party, Issuer is a joint powers authority duly organized and validly existing under the laws of the State of California;

(b) For Purchaser as the representing Party, Purchaser is a municipal utility district duly organized and validly existing under the provisions of the Municipal Utility District Act (Division 6, Chapter 2, Articles 2 and 3, Sections 11581 through 11614 of the California Public Utilities Code, as amended) and the laws of the State of California;

(c) it has all requisite power and authority to conduct its business, to own its properties and to execute, deliver and perform its obligations under this Agreement;

(d) there is no litigation, action, suit, proceeding with service of process accomplished with respect to such Party or investigation pending or, to the best of such Party's knowledge, (i) pending investigation or (ii) threatened litigation, action, suit or proceeding, in each case, before or by any Government Agency, and, in each case, which could reasonably be expected to materially and adversely affect the performance by such Party of its obligations under this Agreement or that questions the validity, binding effect or enforceability hereof, any action taken or to be taken by such Party pursuant hereto, or any of the transactions contemplated hereby;

(e) the execution, delivery and performance of this Agreement by such Party have been duly authorized by all necessary action on the part of such Party and its governing body and do not require any approval or consent of any security holder of such Party or any holder (or any trustee for any holder) of any indebtedness or other obligation of such Party;

(f) this Agreement has been duly executed and delivered on behalf of such Party by an appropriate officer or authorized Person of such Party and constitutes the legal, valid and binding obligation of such Party, enforceable against it in accordance with its terms, as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium and similar Laws affecting creditors' rights generally and by general principles of equity;

(g) the execution, delivery and performance of this Agreement by such Party shall not violate any provision of any Law, rule, regulation, order, writ, judgment, decree or other legal or regulatory determination applicable to it;

(h) the execution, delivery and performance by such Party of this Agreement, and the consummation of the transactions contemplated hereby, including the incurrence by such Party of its financial obligations under this Agreement, shall not result in any violation of any term of any material contract or agreement applicable to it, or any of its charter or bylaws or of any license, permit, franchise, judgment, writ, injunction or regulation, decree, order, charter, Law, ordinance, rule or regulation applicable to it or any of its properties or to any obligations incurred by it or by which it or any of its properties or obligations are bound or affected, or of any determination or award of any arbitrator applicable to it, and shall not conflict with, or cause a breach of, or default under, any such term or result in the creation of any lien upon any of its properties or assets, except with respect to Issuer, the lien of the Bond Indenture and as otherwise contemplated by the Bond Indenture and the Receivables Purchase Provisions (as defined in the Bond Indenture);

(i) to the best of the knowledge and belief of such Party, no consent, approval, order or authorization of, or registration, declaration or filing with, or giving of notice to, obtaining of any license or permit from, or taking of any other action with respect to, any Government Agency is required in connection with the valid authorization, execution, delivery and performance by such Party of this Agreement or the consummation of any of the transactions contemplated hereby other than those that have been obtained; and

(j) it enters this Agreement as a bona-fide, arm's-length transaction involving the mutual exchange of consideration and, once executed by both Parties, considers this Agreement a legally enforceable contract.

Section 8.2 Warranty of Title. Issuer warrants that it will have the right to convey and will transfer good and merchantable title to all Gas sold under this Agreement and delivered by it to Purchaser, free and clear of all liens, encumbrances, and claims, *provided* that with respect to any portion of the Contract Quantity of Gas for which a Gas Assignment Agreement is in effect, this warranty is limited to any liens, encumbrances and claims created by, through or under Issuer or Prepay LLC. Issuer assumes all liability for and, subject to the provisions of Section 18.1, shall indemnify, defend and hold harmless Purchaser from any Claims arising from breach of this warranty.

Section 8.3 Disclaimer of Warranties. EXCEPT FOR THE WARRANTIES EXPRESSLY MADE BY PURCHASER AND ISSUER IN THIS ARTICLE VIII, PURCHASER AND ISSUER HEREBY DISCLAIM ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Section 8.4 Continuing Disclosure. Purchaser agrees to provide to Issuer: (a) such financial and operating information as may be requested by Issuer including its most recent audited financial statements for use in Issuer's offering documents for the Bonds; and (b) annual updates to such information and statements to enable Issuer to comply with its continuing disclosure undertakings under Rule 15(c)2-12 of the United States Securities and Exchange Commission. Failure by Purchaser to comply with its agreement to provide such annual updates shall not be a default under this Agreement, but any such failure shall entitle Issuer or an owner of the Bonds to take such actions and to initiate such proceedings as may be necessary and appropriate to cause

Purchaser to comply with such agreement, including without limitation the remedies of mandamus and specific performance.

ARTICLE IX TAXES

Issuer shall (i) be responsible for all ad valorem, excise, severance, production and other taxes assessed with respect to Commodities (other than any portion of the Contract Quantity for which a Gas Assignment Agreement or a PPA Assignment is in effect) delivered pursuant to this Agreement upstream of the Delivery Point, and (ii) indemnify Purchaser and its Affiliates for any such taxes paid by Purchaser or its Affiliates. Purchaser shall (i) be responsible for all such taxes assessed at or downstream of the Delivery Point, and (ii) indemnify Issuer and its Affiliates for any such taxes paid by Issuer or its Affiliates.

ARTICLE X WAIVER OF JURY TRIAL

TO THE EXTENT PERMITTED BY LAW, EACH OF THE PARTIES HEREBY AGREES TO WAIVE ITS RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING UNDER THIS AGREEMENT. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS AGREEMENT, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. EACH PARTY ACKNOWLEDGES THAT THIS WAIVER IS A MATERIAL INDUCEMENT TO ENTER INTO A BUSINESS RELATIONSHIP, THAT EACH HAS ALREADY RELIED ON THIS WAIVER IN ENTERING INTO THIS AGREEMENT, AND THAT EACH WILL CONTINUE TO RELY ON THIS WAIVER IN ITS RELATED FUTURE DEALINGS. EACH PARTY FURTHER WARRANTS AND REPRESENTS THAT IT HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL. THIS WAIVER IS IRREVOCABLE, MEANING THAT IT MAY NOT BE MODIFIED EITHER ORALLY OR IN WRITING (OTHER THAN BY MUTUAL WRITTEN WAIVER SPECIFICALLY REFERRING TO THIS Article X AND EXECUTED BY EACH OF THE PARTIES), AND THIS WAIVER SHALL APPLY TO ANY SUBSEQUENT AMENDMENTS, RENEWALS, SUPPLEMENTS OR MODIFICATIONS HERETO. IN THE EVENT OF LITIGATION, THIS AGREEMENT MAY BE FILED AS A WRITTEN CONSENT TO A TRIAL BY A COURT.

ARTICLE XI FORCE MAJEURE

Section 11.1 Applicability of Force Majeure. To the extent either Party is prevented by Force Majeure from carrying out, in whole or part, its obligations under this Agreement and such Party (the "Claiming Party") gives notice and details of the Force Majeure to the other Party as soon as practicable, then the Claiming Party shall be excused from the performance of its obligations with respect to this Agreement (other than the obligation to make payments then due

or becoming due with respect to performance prior to the Force Majeure). The Claiming Party shall mitigate the Force Majeure with all reasonable dispatch. For the duration of the Claiming Party's non-performance (and only for such period), the non-Claiming Party shall not be required to perform or resume performance of its obligations to the Claiming Party corresponding to the obligations of the Claiming Party excused by Force Majeure.

Section 11.2 Settlement of Labor Disputes. Notwithstanding anything to the contrary herein, the Parties agree that the settlement of strikes, lockouts or other industrial disturbances shall be within the sole discretion of the Party experiencing such disturbance, and the failure of a Party to settle such strikes, lockouts or other industrial disturbances shall not prevent the existence of Force Majeure or of reasonable dispatch to remedy the same.

ARTICLE XII GOVERNMENTAL RULES AND REGULATIONS

Section 12.1 Compliance with Laws. This Agreement shall be subject to all present and future Laws of any Government Agency having jurisdiction, and neither Party has knowingly undertaken or will knowingly undertake or knowingly cause to be undertaken any activity that would conflict with such Laws; *provided*, however, that nothing herein shall be construed to restrict or limit either Party's right to object to or contest any such Law, or its application to this Agreement or the transactions undertaken hereunder, and neither acquiescence therein or compliance therewith for any period of time shall be construed as a waiver of such right.

Section 12.2 Contests. Excluding all matters involving a contractual dispute between the Parties, no Party shall contest, cause to be contested or in any way actively support the contest of the equity, fairness, reasonableness or lawfulness of any terms or conditions set forth or established pursuant to this Agreement, as those terms or conditions may be at issue before any Government Agency in any proceeding, if the successful result of such contest would be to preclude or excuse the performance of this Agreement by either Party.

Section 12.3 Defense of Agreement. Excluding all matters involving a contractual dispute between the Parties, each Party shall hereafter defend and support this Agreement before any Government Agency in any proceeding, if the substance, validity or enforceability of all or any part of this Agreement is hereafter directly challenged or if any proposed changes in regulatory practices or procedures would have the effect of making this Agreement invalid or unenforceable or would subject either Party to any greater or different regulation or jurisdiction that materially affects the rights or obligations of the Parties under this Agreement.

ARTICLE XIII ASSIGNMENT

The terms and provisions of this Agreement shall extend to and be binding upon the Parties and their respective successors, assigns, and legal representatives; *provided*, however, that, subject to Section 18.14, neither Party may assign this Agreement or its rights and interests, in whole or in part, under this Agreement without the prior written consent of the other Party; *provided* furthermore that, for the avoidance of doubt, any applicable Gas Assignment Agreement or PPA Assignment Agreement shall terminate concurrent with the assignment of this Agreement.

Prior to assigning this Agreement, Purchaser shall deliver to Issuer (i) written confirmation from each of the Applicable Rating Agencies; *provided* that such agency has rated and continues to rate the Bonds, that the assignment will not result in a reduction, qualification, or withdrawal of the then-current ratings assigned by the Applicable Rating Agencies to the Bonds; or (ii) written confirmation from each of the Applicable Rating Agencies, that the assignee has an outstanding long-term senior, unsecured, unenhanced debt rating equivalent to or higher than the ratings assigned by the Applicable Rating Agencies to the Bonds. Whenever an assignment or a transfer of a Party's interest in this Agreement is requested to be made with the written consent of the other Party, the assigning or transferring Party's assignee or transferee shall expressly agree to assume, in writing, the duties and obligations under this Agreement of the assigning or transferring Party. Upon the agreement of a Party to any such assignment or transfer, the assigning or transferring Party shall furnish or cause to be furnished to the other Party a true and correct copy of such assignment or transfer and assumption of duties and obligations.

ARTICLE XIV PAYMENTS

Section 14.1 Monthly Statements.

(a) No later than the 7th day of each Month during the Delivery Period (excluding the first Month of the Delivery Period) and the first Month following the end of the Delivery Period, Purchaser shall deliver to Issuer a statement (a "Purchaser's Statement") listing (i) for each purchase of Replacement Gas or Replacement Electricity, the quantity and replacement price applicable to such purchase, and (ii) any other amounts due to Purchaser in connection with this Agreement with respect to the prior Month(s).

(b) No later than the 12th day of each Month during the Delivery Period (excluding the first Month of the Delivery Period) and the first Month following the end of the Delivery Period (the "Billing Date"), Issuer shall deliver a statement (a "Billing Statement") to Purchaser indicating (i) the total amount due to Issuer for Commodities delivered in the prior Month, (ii) any other amounts due to Issuer or Purchaser in connection with this Agreement with respect to the prior Month(s), and (iii) the net amount due to Issuer or Purchaser. If the actual quantity delivered is not known by the Billing Date, Issuer may provisionally prepare a Billing Statement based on Issuer's best available knowledge of the quantity of Commodities delivered, which shall not exceed the sum of the Contract Quantity of all the Gas Days or Hours (as applicable) in such Month plus any make-up quantities delivered during such Month. The invoiced quantity and amounts paid thereon (with interest calculated on the amount overpaid or underpaid by Purchaser at the Default Rate) will then be adjusted on the following Month's Billing Statement, as actual delivery information becomes available based on the actual quantity delivered.

(c) Upon request by either Party, the other Party shall deliver such supporting documentation of the foregoing as such requesting Party may reasonably request.

Section 14.2 Payment.

(a) If the Billing Statement indicates an amount due from Purchaser, then Purchaser shall remit such amount to the Trustee for the benefit of Issuer by wire transfer (pursuant

to the Trustee's instructions), in immediately available funds, on or before the later of (i) the 22nd day of the Month following the most recent Month to which such Billing Statement relates, or (ii) the 10th day following Purchaser's receipt of Issuer's Billing Statement, or if either such day is not a Business Day, the preceding Business Day. If the Billing Statement indicates an amount due from Issuer, then Issuer shall remit such amount to Purchaser by wire transfer (pursuant to Purchaser's instructions), in immediately available funds, on or before the later of (i) the 28th day of the Month following the most recent Month to which such Billing Statement relates, or (ii) the 10th day following Issuer's receipt of Purchaser's Statement, or if either such day is not a Business Day, the following Business Day.

(b) If Purchaser fails to issue a Purchaser's Statement with respect to any Month, Issuer shall not be required to estimate any amounts due to Purchaser for such Month, *provided* that Purchaser may include any such amount on subsequent Purchaser's Statements issued within the next sixty (60) days. The sixty (60)-day deadline in this subsection (b) replaces the two (2)-year deadline in Section 14.5(b) with respect to any claim by any non-delivering Party of inaccuracy in any estimated invoice issued or payment made pursuant to this subsection (b).

Section 14.3 Payment of Disputed Amounts. If Purchaser disputes any amounts included in Issuer's Billing Statement, Purchaser shall (except in the case of manifest error) nonetheless pay any amount required by the Billing Statement in accordance with Section 14.2 without regard to any right of set-off, counterclaim, recoupment or other defenses to payment that Purchaser may have; *provided*, however, that Purchaser shall have the right, after payment, to dispute any amounts included in a Billing Statement or otherwise used to calculate payments due under this Agreement pursuant to Section 14.5. If Issuer disputes any amounts included in the Purchaser's Statement, Issuer may withhold payment to the extent of the disputed amount; *provided*, however, that interest shall be due at the Default Rate for any withheld amount later found to have been properly due.

Section 14.4 Late Payment. If Purchaser fails to remit the full amount payable within one Business Day of when due, interest on the unpaid portion shall accrue from the date due until the date of payment at the Default Rate.

Section 14.5 Audit; Adjustments.

(a) A Party shall have the right, at its own expense, upon reasonable notice to the other Party and at reasonable times, to examine and audit and to obtain copies of the relevant portion of the books, records, and telephone recordings of the other Party to the extent reasonably necessary, but only to such extent, to verify the accuracy of any statement, charge, payment, or computation made under this Agreement; *provided* that, notwithstanding the foregoing, to the extent any such examination and audit reveals any material discrepancy in the other Party's books and records, the examining Party shall have a right to be reimbursed by the other Party for costs reasonably incurred in connection with such examination and audit. This right to examine, audit, and obtain copies shall not be available with respect to proprietary information not directly relevant to transactions under this Agreement.

(b) Each Purchaser's Statement and each Billing Statement shall be conclusively presumed final and accurate and all associated claims for under- or overpayments shall be deemed waived unless such Purchaser's Statement or Billing Statement is objected to in

writing, with adequate explanation and/or documentation, within two (2) years after the applicable Month of Commodity delivery.

(c) All retroactive adjustments shall be paid in full by the Party owing payment within 30 days of notice and substantiation of such inaccuracy. If the Parties are unable to agree upon any retroactive adjustments requested by either Party within the time period specified in Section 14.5(b), then either Party may pursue any remedies available with respect to such adjustments at law or in equity. Retroactive adjustments for payments made based on incorrect Billing Statement(s) shall bear interest at the Default Rate from the date such payment was made.

Section 14.6 Netting; No Set-Off. The Parties shall net all amounts due and owing, including any past due amounts (which, for the avoidance of doubt, shall include any accrued interest), arising under this Agreement such that the Party owing the greater amount shall make a single payment of the net amount to the other Party in accordance with this Article XIV. Notwithstanding the foregoing, payment for all amounts set forth in a Billing Statement provided to Purchaser shall be made without set-off or counterclaim of any kind.

Section 14.7 Source of Purchaser's Payments. Purchaser covenants and agrees to make payments due hereunder from Utility Revenues, and only from such Utility Revenues, as an operating expense of its utility system or an Energy Payment (as defined in Section 14.9); *provided*, however, that Purchaser may apply any legally available monies to the payment of amounts due hereunder.

Section 14.8 Rate Covenant. Purchaser hereby covenants and agrees that it will establish, fix, prescribe, maintain, and collect rates, fees, and charges from the customers of its utility system so as to provide Utility Revenues sufficient to enable Purchaser to pay any other amounts legally payable from Utility Revenues, and to maintain any required reserves for Purchaser's utility system. Purchaser further covenants and agrees that it shall not furnish or supply services free of charge to any Person, except any such service free of charge that Purchaser is supplying on the date hereof as has been specifically identified by Purchaser to Issuer in writing, and it shall promptly enforce the payment of any and all accounts owing to Purchaser for the sale of Commodities or the provision of distribution or other services to its customers. Notwithstanding anything herein to the contrary, Purchaser shall not be obligated to make any payments hereunder except from Utility Revenues.

Section 14.9 Pledge of Utility Revenues. Purchaser shall not grant any lien on or security interest in, or otherwise pledge or encumber, the Utility Revenues if the terms or effect of such lien, pledge or other encumbrance results in such lien, pledge or other encumbrance having priority over the obligations of Purchaser to pay the Contract Price for its Contract Quantities hereunder, which obligations constitute operating expenses or Energy Payments (as such term is defined in Purchaser's Resolution No. 6649, adopted January 7, 1971, as amended and supplemented through May 18, 2024) of Purchaser.

ARTICLE XV
PPA ASSIGNMENT AGREEMENTS

Section 15.1 Generally. From time to time, Purchaser may be a party to one or more power purchase agreements other than this Agreement (each such agreement, an “Assignable Contract”) pursuant to which Purchaser is purchasing Electricity, RECs and other products that may be assigned pursuant to Exhibit H. In accordance with this Article XV and Exhibit H, Purchaser may assign, and pursuant to Section 15.1 of the Prepaid Agreement, Issuer shall request that J. Aron accept the assignment of a portion of Purchaser’s rights and obligations under such Assignable Contract (the “Assigned Rights and Obligations”), and J. Aron, to the extent it accepts such assignment, will deliver Assigned Product it receives from such Assigned Rights and Obligations to Issuer under the Prepaid Agreement, and Issuer will deliver such Assigned Product to Purchaser under this Agreement; *provided* that, for the avoidance of doubt, any such assignment shall constitute a partial assignment and delegation. Any such assignments must be proposed and agreed pursuant to Exhibit H and the Prepaid Agreement. To the extent so assigned, Issuer’s obligation to deliver, and Purchaser’s obligation to receive, the Hourly Quantity shall be reduced in accordance with Exhibit H to reflect the Assigned Product acquired by Issuer pursuant to such assignment.

Section 15.2 Early Termination of Assignment Period. Except for any Assignment Period that terminates contemporaneously with this Agreement, upon termination for any reason of the Assignment Period for any PPA Assignment Agreement, all reductions that have been made under Exhibit H to the Hourly Quantity shall be increased for all future periods to reverse any reductions to the Hourly Quantity made in connection with such PPA Assignment Agreement.

ARTICLE XVI NOTICES

Any notice, demand, or request required or authorized by this Agreement to be given by one Party to the other Party (or to a third party) shall be in writing and shall either be sent by email transmission, courier, or personal delivery (including overnight delivery service) to each of the notice recipients and addresses specified in Exhibit B for the receiving Party. Any such notice, demand, or request shall be deemed to be (i) when delivered by email transmission, or (ii) when actually received if delivered by courier or personal delivery (including overnight delivery service). Each Party shall have the right, upon 10 days’ prior written notice to the other Party, to change its list of notice recipients and addresses in Exhibit B. The Parties may mutually agree in writing at any time to deliver notices, demands or requests through alternate or additional methods. Notwithstanding the foregoing, either Party may at any time notify the other that any notice, demand, statement, or request to it must be provided by email transmission for a specified period of time or until further notice, and any communications delivered by means other than email transmission during the specified period of time shall be ineffective.⁵

ARTICLE XVII DEFAULT; REMEDIES; TERMINATION

Section 17.1 Issuer Default. Each of the following events shall constitute an “Issuer Default” under this Agreement:

⁵ OHS NTD: Minor edits for consistency with Prepaid Agreement.

(a) any representation or warranty made by Issuer in this Agreement shall prove to have been incorrect in any material respect when made; or

(b) Issuer shall have failed to perform, observe or comply with any covenant, agreement or term contained in this Agreement, and such failure continues for more than thirty (30) days following the earlier of (i) receipt by Issuer of notice thereof or (ii) an officer of Issuer becoming aware of such default.

Section 17.2 Purchaser Default. Each of the following events shall constitute a “Purchaser Default” under this Agreement:

(a) Purchaser fails to pay when due any amounts owed to Issuer pursuant to this Agreement and such failure continues for one (1) Business Day following the earlier of (i) receipt by Purchaser of notice thereof or (ii) an officer of Purchaser becoming aware of such default;

(b) Purchaser (i) is dissolved (other than pursuant to a consolidation, amalgamation or merger); (ii) becomes insolvent or is unable to pay its debts or fails or admits in writing its inability generally to pay its debts as they become due; (iii) makes a general assignment, arrangement or composition with or for the benefit of its creditors; (iv) institutes or has instituted against it a proceeding seeking a judgment of insolvency or bankruptcy or any other relief under any bankruptcy or insolvency Law or other similar Law affecting creditors’ rights, or a petition is presented for its winding-up or liquidation, and, in the case of any such proceeding or petition instituted or presented against it, such proceeding or petition (A) results in a judgment of insolvency or bankruptcy or the entry of an order for relief or the making of an order for its winding-up or liquidation or (B) is not dismissed, discharged, stayed or restrained, in each case within thirty (30) days of the institution or presentation thereof; (v) has a resolution passed for its winding-up, official management or liquidation (other than pursuant to a consolidation, amalgamation or merger); (vi) seeks or becomes subject to the appointment of an administrator, provisional liquidator, conservator, receiver, trustee, custodian or other similar official for it or for all or substantially all of its assets; (vii) has a secured party take possession of all or substantially all of its assets or has a distress, execution, attachment, sequestration or other legal process levied, enforced or sued on or against all or substantially all its of assets and such secured party maintains possession, or any such process is not dismissed, discharged, stayed or restrained, in each case within thirty (30) days thereafter; (viii) causes or is subject to any event with respect to it which, under the applicable Laws of any jurisdiction, has an analogous effect to any of the events specified in clauses (i) through (vii); or (ix) takes any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any of the foregoing acts;

(c) any representation or warranty made by Purchaser in this Agreement proves to have been incorrect in any material respect when made; or

(d) Purchaser shall have failed to perform, observe or comply with any covenant, agreement or term contained in this Agreement, and such failure continues for more than fifteen (15) days following the earlier of (i) receipt by Purchaser of notice thereof or (ii) an officer of Purchaser becoming aware of such default.

Section 17.3 Remedies Upon Default.

(a) Termination. If at any time an Issuer Default or a Purchaser Default has occurred and is continuing, then the non-defaulting Party may do any or all of the following (i) by notice to the defaulting Party specifying the relevant Issuer Default or Purchaser Default, as applicable, terminate this Agreement effective as of a day not earlier than the day such notice is deemed given under Article XVI and/or declare all amounts due to the non-defaulting Party under this Agreement or any part thereof immediately due and payable, and the same shall thereupon become immediately due and payable, without notice, demand, presentment, notice of dishonor, notice of intent to demand, protest or other formalities of any kind, all of which are hereby expressly waived by the defaulting Party; *provided*, however, this Agreement shall automatically terminate and all amounts due to the non-defaulting Party hereunder shall immediately become due and payable as of the time immediately preceding the institution of the relevant proceeding or the presentation of the relevant petition that upon the occurrence of a Purchaser Default specified in Section 17.2(b)(iv) or, to the extent analogous thereto, Section 17.2(b)(viii). In addition, during the existence of an Issuer Default or a Purchaser Default, as applicable, the non-defaulting Party may exercise all other rights and remedies available to it at Law or in equity, including without limitation mandamus, injunction and action for specific performance, to enforce any covenant, agreement or term of this Agreement.

(b) Additional Remedies. In addition to the remedies set forth in Section 17.3(a) (and without limiting any other provisions of this Agreement), during the existence of any Purchaser Default, Issuer may suspend its performance hereunder and discontinue the supply of all or any portion of the Commodities otherwise to be delivered to Purchaser by it under this Agreement. If Issuer exercises its right to suspend performance under this Section 17.3(b), Purchaser shall remain fully liable for payment of all amounts in default and shall not be relieved of any of its payment obligations under this Agreement. Deliveries of Commodities may only be reinstated, at a time to be determined by Issuer, upon (i) payment in full by Purchaser of all amounts then due and payable under this Agreement and (ii) payment in advance by Purchaser at the beginning of each Month of amounts estimated by Issuer to be due to Issuer for the future delivery of Commodities under this Agreement for such Month. Issuer may continue to require payment in advance from Purchaser after the reinstatement of Issuer's supply services under this Agreement for such period of time as Issuer in its sole discretion may determine is appropriate. In addition, and without limiting any other provisions of or remedies available under this Agreement, if Purchaser fails to accept from Issuer any Commodities tendered for delivery under this Agreement, Issuer shall have the right to sell such Commodities to third parties on any terms that Issuer, in its sole discretion, determines are appropriate.

(c) Effect of Early Termination. As of the effectiveness of any termination date in accordance with clause (i) of Section 17.3(a), (i) the Delivery Period shall end, (ii) the obligation of Issuer to make any further deliveries of Commodities to Purchaser under this Agreement shall terminate, and (iii) the obligation of Purchaser to receive deliveries of Commodities from Issuer under this Agreement will terminate. Neither this Agreement nor the Delivery Period may be terminated for any reason except as specified in this Article XVII. Without prejudice to any payment obligation in respect of periods prior to termination, no payments will be due from either Party in respect of periods occurring after the effective termination date of this Agreement.

Section 17.4 Termination of Prepaid Agreement. Purchaser acknowledges and agrees that (i) in the event the Prepaid Agreement terminates for any reason prior to the end of the primary

term of this Agreement, this Agreement shall terminate on the effective date of early termination of the Prepaid Agreement (which date shall be the last date upon which deliveries are required thereunder, subject to all winding up arrangements) and (ii) Issuer's obligation to deliver Commodities under this Agreement shall terminate upon the termination of deliveries of Commodities to Issuer under the Prepaid Agreement. Issuer shall provide notice to Purchaser of any early termination date of the Prepaid Agreement. The Parties recognize and agree that, in the event that the Prepaid Agreement terminates because of a Failed Remarketing (as defined in the Bond Indenture) of the Bonds that occurs in the first Month of a Reset Period, Issuer shall deliver Commodities under this Agreement for the remainder of such first Month, and, notwithstanding anything in this Agreement to the contrary, no Monthly Discount Percentage or Annual Refunds shall be associated with such deliveries and the Contract Price shall be adjusted accordingly.

Section 17.5 Limitation on Damages. THE PARTIES CONFIRM THAT THE EXPRESS REMEDIES AND MEASURES OF DAMAGES PROVIDED IN THIS AGREEMENT SATISFY THE ESSENTIAL PURPOSES HEREOF. FOR BREACH OF ANY PROVISION FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS HEREIN PROVIDED, SUCH EXPRESS REMEDY OR MEASURE OF DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY, THE OBLIGOR'S LIABILITY SHALL BE LIMITED AS SET FORTH IN SUCH PROVISION, AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. NEITHER PARTY SHALL BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY, OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION, OR OTHERWISE. IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING WITHOUT LIMITATION THE NEGLIGENCE OF EITHER PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE. TO THE EXTENT ANY DAMAGES REQUIRED TO BE PAID UNDER THIS AGREEMENT ARE LIQUIDATED, THE PARTIES ACKNOWLEDGE THAT THE DAMAGES ARE DIFFICULT OR IMPOSSIBLE TO DETERMINE, OTHERWISE OBTAINING AN ADEQUATE REMEDY IS INCONVENIENT, AND THE LIQUIDATED DAMAGES CONSTITUTE A REASONABLE APPROXIMATION OF THE HARM OR LOSS. IN DETERMINING THE APPROPRIATE MEASURE OF DAMAGES THAT WOULD MAKE THE PARTIES WHOLE, THE PARTIES HAVE THOROUGHLY CONSIDERED, INTER ALIA, THE UNCERTAINTY OF FLUCTUATIONS IN COMMODITY PRICES, THE ABILITY AND INTENTION OF THE PARTIES TO HEDGE SUCH FLUCTUATIONS, THE BARGAINED-FOR ALLOCATION OF RISK, THE KNOWLEDGE, SOPHISTICATION AND EQUAL BARGAINING POWER OF THE PARTIES, THE ARMS-LENGTH NATURE OF THE NEGOTIATIONS, THE SPECIAL CIRCUMSTANCES OF THIS TRANSACTION, THE ACCOUNTING AND TAX TREATMENT OF THE TRANSACTION BY THE PARTIES, AND THE ENTERING INTO OF OTHER TRANSACTIONS IN RELIANCE ON THE ENFORCEABILITY OF THE LIQUIDATED DAMAGES PROVISIONS CONTAINED HEREIN. THE PARTIES ACKNOWLEDGE THAT THIS IS A SALE OF GOODS SUBJECT TO ARTICLE 2 OF THE NEW YORK UNIFORM COMMERCIAL CODE, INCLUDING WITHOUT LIMITATION, §§ 2-706(6), 2-711, 2-718, AND 2-719.

ARTICLE XVIII MISCELLANEOUS

Section 18.1 Indemnification Procedure. With respect to each indemnification included in this Agreement, the indemnity is given to the fullest extent permitted by applicable Law and the following provisions shall be applicable. The indemnified Party shall promptly notify the indemnifying Party in writing of any Claim and the indemnifying Party shall have the right to assume its investigation and defense, including employment of counsel, and shall be obligated to pay related court costs, attorneys' fees and experts' fees and to post any appeals bonds; *provided*, however, that the indemnified Party shall have the right to employ at its expense separate counsel and participate in the defense of any Claim. The indemnifying Party shall not be liable for any settlement of a Claim without its express written consent thereto. In order to prevent double recovery, the indemnified Party shall reimburse the indemnifying Party for payments or costs incurred in respect of an indemnity with the proceeds of any judgment, insurance, bond, surety or other recovery made by the indemnified Party with respect to a covered event.

Section 18.2 Deliveries. Contemporaneously with this Agreement (unless otherwise specified):

(a) Each Party shall deliver to the other Party evidence reasonably satisfactory to it of (i) such Party's authority to execute, deliver and perform its obligations under this Agreement and (ii) the appropriate individuals who are authorized to sign this Agreement on behalf of such Party;

(b) on the Bond Closing Date, Purchaser shall deliver to Issuer a fully executed Federal Tax Certificate in the form attached hereto as Exhibit D; and

(c) on the Bond Closing Date, Purchaser shall deliver to Issuer an opinion of counsel to Purchaser in the form attached hereto as Exhibit E.

Section 18.3 Entirety; Amendments. This Agreement, including the exhibits and attachments hereto, constitutes the entire agreement between the Parties and supersedes all prior discussions and agreements between the Parties with respect to the subject matter hereof. There are no prior or contemporaneous agreements or representations affecting the same subject matter other than those expressed herein. Except for any matters that, in accordance with the express provisions of this Agreement, may be resolved by oral agreement between the Parties, no amendment, modification, supplement or change hereto shall be enforceable unless reduced to writing and executed by both Parties.

Section 18.4 Governing Law. THIS AGREEMENT AND THE RIGHTS AND DUTIES OF THE PARTIES UNDER THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED, ENFORCED AND PERFORMED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO ANY CONFLICTS OF LAW PRINCIPLE THAT WOULD DIRECT THE APPLICATION OF ANOTHER JURISDICTION'S LAW; *PROVIDED*, HOWEVER, THAT THE AUTHORITY OF THE PARTIES TO ENTER INTO AND PERFORM ITS OBLIGATIONS UNDER THIS AGREEMENT SHALL BE DETERMINED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA.

Section 18.5 Non-Waiver. No waiver of any breach of any of the terms of this Agreement shall be effective unless such waiver is in writing and signed by the Party against whom such waiver is claimed. No waiver of any breach shall be deemed a waiver of any other subsequent breach.

Section 18.6 Severability. If any provision of this Agreement, or the application thereof, shall for any reason be invalid or unenforceable, then to the extent of such invalidity or unenforceability, the remainder of this Agreement and the application of such provision to other Persons or circumstances shall not be affected thereby, but rather shall be enforced to the maximum extent permissible under applicable Law, so long as the economic and legal substance of the transactions contemplated hereby is not affected in any materially adverse manner as to either Party.

Section 18.7 Exhibits. Any and all Exhibits referenced in this Agreement are hereby incorporated herein by reference and shall be deemed to be an integral part hereof.

Section 18.8 Winding Up Arrangements. All indemnity and confidentiality obligations, audit rights, and other provisions specifically providing for survival shall survive the expiration or termination of this Agreement. The expiration or termination of this Agreement shall not relieve either Party of (a) any unfulfilled obligation or undischarged liability of such Party on the date of such termination or (b) the consequences of any breach or default of any warranty or covenant contained in this Agreement. All obligations and liabilities described in the preceding sentence of this Section 18.8, and applicable provisions of this Agreement creating or relating to such obligations and liabilities, shall survive such expiration or termination.

Section 18.9 Relationships of Parties. The Parties shall not be deemed to be in a relationship of partners or joint venturers by virtue of this Agreement, nor shall either Party be an agent, representative, trustee or fiduciary of the other. Neither Party shall have any authority to bind the other to any agreement. This Agreement is intended to secure and provide for the services of each Party as an independent contractor.

Section 18.10 Immunity. Each Party represents and covenants to and agrees with the other Party that it is not entitled to claim immunity on the grounds of sovereignty or other similar grounds with respect to itself from (i) suit or (ii) jurisdiction of any court because of its status as a political subdivision of the State of California; *provided* that the foregoing relates only to contractual claims and not to any claim based in tort.

Section 18.11 Rates and Indices. If the source of any publication used to determine the index or other price used in the Contract Price should cease to publish the relevant prices or should cease to be published entirely, an alternative index or other price will be used based on the determinations made by Issuer and Prepay LLC under [Section 19.11] of the Prepaid Agreement. Issuer shall provide Purchaser the opportunity to provide its recommendations and other input to Issuer for Issuer's use in the process for selecting such alternative index or other price under Section [19.11] of the Prepaid Agreement.

Section 18.12 Limitation of Liability. Notwithstanding anything to the contrary herein, all obligations of Issuer under this Agreement, including without limitation all obligations to make

payments of any kind whatsoever, are special, limited obligations of Issuer, payable solely from the Trust Estate (as such term is defined in the Bond Indenture) as and to the extent provided in the Bond Indenture, including with respect to Operating Expenses (as such term is defined in the Bond Indenture). Issuer shall not be required to advance any moneys derived from any source other than the Revenues (as such term is defined in the Bond Indenture) and other assets pledged under the Bond Indenture for any of the purposes in this Agreement mentioned. Neither the faith and credit of Issuer nor the taxing power of the State of California or any political subdivision thereof is pledged to payments pursuant to this Agreement. Issuer shall not be directly, indirectly, contingently or otherwise liable for any costs, expenses, losses, damages, claims or actions, of any conceivable kind on any conceivable theory, under or by reasons of or in connection with this Agreement, except solely to the extent Revenues (as such term is defined in the Bond Indenture) are received for the payment thereof and may be applied therefor pursuant to the terms of the Bond Indenture.

Section 18.13 Counterparts. This Agreement may be executed and acknowledged in multiple counterparts and by the Parties in separate counterparts, each of which shall be an original and all of which shall be and constitute one and the same instrument.

Section 18.14 Third Party Beneficiaries; Rights of Trustee. Purchaser acknowledges and agrees that (a) Issuer will pledge and assign its rights, title and interest in this Agreement and the amounts payable by Purchaser under this Agreement to secure Issuer's obligations under the Bond Indenture, (b) the Trustee shall be a third-party beneficiary of this Agreement with the right to enforce Purchaser's obligations under this Agreement, (c) the Trustee or any receiver appointed under the Bond Indenture shall have the right to perform all obligations of Issuer under this Agreement, and (d) in the event of any Purchaser Defaults under Section 17.2(a), (i) Prepay LLC may, to the extent provided for in, and in accordance with, the Receivables Purchase Provisions (as defined in the Bond Indenture), take assignment from Issuer of receivables owed by Purchaser to Issuer under this Agreement, and Prepay LLC or any third party transferee who purchases and takes assignment of such receivables from Prepay LLC shall thereafter have all rights of collection with respect to such receivables, and (ii) if such receivables are not so assigned, the Swap Counterparty (as defined in the Bond Indenture) shall have the right to pursue collection of such receivables to the extent of any non-payment by Issuer to the Swap Counterparty was caused by Purchaser's payment default. Pursuant to the terms of the Bond Indenture, Issuer has irrevocably appointed the Trustee as its agent to issue notices and as directed under the Bond Indenture, to take any other actions that Issuer is required or permitted to take under this Agreement. Purchaser may rely on notices or other actions taken by Issuer or the Trustee and Purchaser has the right to exclusively rely on any notices delivered by the Trustee, regardless of any conflicting notices that it may receive from Issuer.

Section 18.15 Waiver of Defenses. Purchaser waives all rights to set-off, counterclaim, recoupment and any other defenses that might otherwise be available to Purchaser with regard to Purchaser's obligations pursuant to the terms of this Agreement.

Section 18.16 Rate Changes

(a) Absent the agreement of the Parties to the proposed change, the standard of review for changes to any rate, charge, classification, term or condition of this Agreement, whether

proposed by a Party (to the extent that any waiver in Section 18.16(b) below is unenforceable or ineffective as to such Party), a non-party or FERC acting *sua sponte*, shall solely be the “public interest” application of the “just and reasonable” standard of review set forth in United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332 (1956) and Federal Power Commission v. Sierra Pacific Power Co., 350 U.S. 348 (1956) and clarified by Morgan Stanley Capital Group Inc. v. Public Util. Dist. No. 1 of Snohomish, 554 U.S. 527 (2008).

(b) In addition, and notwithstanding Section 18.16(a), to the fullest extent permitted by applicable Law, each Party, for itself and its successors and assigns, hereby expressly and irrevocably waives any rights it can or may have, now or in the future, whether under Section 205 and/or 206 of the Federal Power Act or otherwise, to seek to obtain from FERC by any means, directly or indirectly (through complaint, investigation or otherwise), and each hereby covenants and agrees not at any time to seek to so obtain, an order from FERC changing any section of this Agreement specifying the rate, charge, classification, or other term or condition agreed to by the Parties, it being the express intent of the Parties that, to the fullest extent permitted by applicable Law, neither Party shall unilaterally seek to obtain from FERC any relief changing the rate, charge, classification, or other term or condition of this Agreement, notwithstanding any subsequent changes in applicable Law or market conditions that may occur. In the event it were to be determined that applicable Law precludes the Parties from waiving their rights to seek changes from FERC to their market-based power sales contracts (including entering into covenants not to do so) then this Section 18.16(b) shall not apply; *provided* that, consistent with Section 18.16(a), neither Party shall seek any such changes except solely under the “public interest” application of the “just and reasonable” standard of review and otherwise as set forth in Section 18.16(a).

IN WITNESS WHEREOF, the Parties have caused this Amended & Restated Commodity Supply Contract to be duly executed and delivered by their respective officers thereunto duly authorized as of the date first above written.

[Separate Signature Page(s) Attached]

Northern California Energy Authority

By: _____
Name: _____
Title: _____

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Name: _____
Title: _____

EXHIBIT A
DELIVERY POINTS; CONTRACT QUANTITIES

[To be attached.]

**EXHIBIT B
NOTICES**

IF TO ISSUER: Northern California Energy Authority
c/o Sacramento Municipal Utility District
Attention: Power Contracts Administration
6301 S Street
Sacramento, CA 95817-1899
Phone: (916) 732-6244
Email: PowerContractsAdmin@smud.org

Gas Related: Gas Trading
916-732-7140
GasTrading@smud.org

Power Related: Day Ahead Trading
916-732-5669
DayAheadTrading@smud.org

Invoicing/Payments: Energy Settlements
916-732-6751
EnergySettlements@smud.org

IF TO PURCHASER: Sacramento Municipal Utility District
Attention: Power Contracts Administration
6301 S Street
Sacramento, CA 95817-1899
Phone: (916) 732-6244
Email: PowerContractsAdmin@smud.org

Gas Related: Gas Trading
916-732-7140
GasTrading@smud.org

Power Related: Day Ahead Trading
916-732-5669
DayAheadTrading@smud.org

Invoicing/Payments: Energy Settlements
916-732-6751
EnergySettlements@smud.org

**EXHIBIT C
FORM OF REMARKETING ELECTION NOTICE**

Northern California Energy Authority
[Address]

Aron Energy Prepay 33 LLC
[Address]

Wells Fargo Bank, National Association
[Address]

To the Addressees:

The undersigned, duly authorized representative of Sacramento Municipal Utility District (the "Purchaser"), is providing this notice (the "Remarketing Election Notice") pursuant to the Amended & Restated Commodity Supply Contract, dated as of [____], 2024 (the "Supply Contract"), between Northern California Energy Authority and Purchaser. Capitalized terms used herein shall have the meanings set forth in the Supply Contract.

Pursuant to Section 3.4(b) of the Supply Contract, the Purchaser has elected to have its Contract Quantity for each Gas Day or Delivery Hour (as applicable) of the applicable Reset Period remarketed beginning as of the commencement of such Reset Period. The resumption of deliveries in any future Reset Period shall be in accordance with Section 3.4(d) of the Supply Contract.

Given this [____] day of [_____], 20[____].

Sacramento Municipal Utility District

By: _____
Printed Name:
Title:

EXHIBIT D
FORM OF FEDERAL TAX CERTIFICATE

[____], 2024

This Federal Tax Certificate is executed in connection with the Amended & Restated Commodity Supply Contract dated as of [____], 2024 (the “Supply Contract”), by and between Northern California Energy Authority (“Issuer”) and Sacramento Municipal Utility District (“Purchaser”). Capitalized terms used and not otherwise defined herein shall have the meanings given to them in the Supply Contract, in the Tax Certificate and Agreement, or in the Bond Indenture.

WHEREAS Purchaser acknowledges that Issuer is issuing the Bonds to fund the prepayment price under the Prepaid Agreement; and

WHEREAS the Bonds are intended to qualify for tax exemption under Section 103 of the Internal Revenue Code of 1986, as amended; and

WHEREAS Purchaser’s use of Commodities acquired pursuant to the Supply Contract and certain funds and accounts of Purchaser will affect the Bonds’ qualification for such tax exemption.

NOW, THEREFORE, PURCHASER HEREBY CERTIFIES AS FOLLOWS:

1. Purchaser is a municipal utility district created and existing pursuant to the provisions of organized under the provisions of the Municipal Utility District Act (Division 6, Chapter 2, Articles 2 and 3, Sections 11581 through 11614 of the California Public Utilities Code, as amended).
2. Purchaser will resell Electricity acquired pursuant to the Supply Contract and use all Gas acquired pursuant to the Supply Contract to generate Electricity that is resold, in each case, to its retail Electricity customers within its service area, with retail sales in all cases being made pursuant to regularly established and generally applicable tariffs or under authorized requirements contracts. For purposes of the foregoing sentence, the term “service area” means (x) the area throughout which Purchaser provided Electricity transmission or distribution service at all times during the 5-year period ending on [December 31, 2023], and from then until the date of issuance of the Bonds (the “Closing Date”), and (y) any area recognized as the service area of Purchaser under state or federal law.
3. The annual average amount during the testing period of Gas purchased (other than for resale) used by Purchaser to generate Electricity that is purchased (other than for resale) by customers of Purchaser who are located within the service area of Purchaser is [_____] MMBtu. The maximum annual amount of Gas in any year being acquired pursuant to the Supply Contract is [_____] MMBtu. The annual average amount of Gas that Purchaser holds in storage as of the Closing Date is [_____] MMBtu. The annual average amount of Gas that Purchaser otherwise has a right to acquire as of the Closing Date is [_____] MMBtu. The sum of (a) the maximum amount of Gas in any year being acquired pursuant to the Supply Contract, (b) the annual average amount of Gas which Purchaser holds in storage, and (c) the amount of Gas which Purchaser otherwise has a right to acquire in the year described in the foregoing clause (a) is

[] MMBtu. Accordingly, the amount of Gas to be acquired under the Supply Contract by Purchaser, supplemented by the amount of Gas otherwise available to Purchaser as of the Closing Date, during any year does not exceed the sum of (i) []% of the annual average amount during the testing period of Gas purchased to generate Electricity that is purchased (other than for resale) by customers of Purchaser who are located within the service area of Purchaser; and (ii) the amount of Gas to be used to transport the prepaid Gas to Purchaser during such year. For purposes of this paragraph 3, the term "testing period" means the 5 calendar years ending [December 31, 2023], and the term "service area" means (x) the area throughout which Purchaser provided Gas distribution service at all times during the testing period, (y) any area within a county contiguous to the area described in (x) in which retail customers of Purchaser are located if such area is not also served by another utility providing Gas services, and (z) any area recognized as the service area of Purchaser under state or federal law.

4. Purchaser expects to pay for Gas acquired pursuant to the Supply Contract solely from funds derived from its Electricity distribution operations. Purchaser expects to use current net revenues of its to pay for current Gas acquisitions. There are no funds or accounts of Purchaser or any person who is a Related Person to Purchaser in which monies are invested and which are reasonably expected to be used to pay for Gas acquired more than one year after it is acquired. No portion of the proceeds of the Bonds will be used directly or indirectly to replace funds of Purchaser or any persons who are Related Persons to Purchaser that are or were intended to be used for the purpose for which the Bonds were issued.

_____, 2024

[Participant]

By: _____

[Name]
[Title]

EXHIBIT E
FORM OF OPINION OF COUNSEL TO PURCHASER

[_____], 2024

Northern California Energy Authority
c/o Sacramento Municipal Utility District
6301 S Street
Sacramento, CA 95817-1899
Attention: Power Contracts Administration

Aron Energy Prepay 33 LLC
c/o J. Aron & Company LLC
200 West Street
New York, NY 10282-2198

Goldman Sachs & Co. LLC
200 West Street
New York, NY 10282

Wells Fargo Bank, National Association, as trustee
600 S. 4th St., 6th
MAC N9300-060
Minneapolis, MN 55415
Attention: Corporate Trust
Reference: [NCEA Commodity Supply Revenue Bonds, Series 2024]

Royal Bank of Canada

[____]
[____]
[____]

Re: Amended & Restated Commodity Supply Contract between
Sacramento Municipal Utility District and Northern
California Energy Authority dated as of [____], 2024

Ladies and Gentlemen:

We are Counsel to Sacramento Municipal Utility District (“Purchaser”). Purchaser is a Purchaser in the Commodity Project undertaken by Northern California Energy Authority (“Issuer”). We are furnishing this opinion to you in connection with the Amended & Restated Commodity Supply Contract between Issuer and Purchaser dated as of [____], 2024 (the “Supply Contract”).

Unless otherwise specified herein, all terms used but not defined in this opinion shall have the same meaning as is ascribed to them in the Supply Contract.

In connection with this opinion, we have examined originals or copies, certified or otherwise identified to our satisfaction, of the following:

(a) The Constitution and laws of the State of California (the “State”) including, as applicable, acts, ordinances, certificates, articles, charters, bylaws, and agreements pursuant to which Purchaser was created and by which it is governed;

(b) Resolution No. [], duly adopted by Purchaser on [] (the “Resolution”) and certified as true and correct by certificate and seal, authorizing Purchaser to execute and deliver the Supply Contract;

(c) A copy of the Supply Contract executed by Purchaser; and

(d) All outstanding instruments relating to bonds, notes, or other indebtedness of or relating to Purchaser and Purchaser's municipal utility district.

We have also examined and relied upon originals or copies, certified or otherwise authenticated to our satisfaction, of such records, documents, certificates, and other instruments, and made such investigations of law, as in our judgment we have deemed necessary or appropriate to enable us to render the opinions expressed below.

Based upon the foregoing, we are of the opinion that:

1. Purchaser is a municipal utility district of the State, duly organized and validly existing under the laws of the State, and has the power and authority to own its properties, to carry on its business as now being conducted, and to enter into and to perform its obligations under the Agreement.

2. The execution, delivery, and performance by Purchaser of the Supply Contract have been duly authorized by the governing body of Purchaser and do not and will not require, subsequent to the execution of the Supply Contract by Purchaser, any consent or approval of the governing body or any officers of Purchaser.

3. The Supply Contract is the legal, valid, and binding obligation of Purchaser, enforceable in accordance with its terms, except as such enforceability may be subject to (i) the exercise of judicial discretion in accordance with general principles of equity and (ii) bankruptcy, insolvency, reorganization, moratorium, and other similar laws affecting creditors' rights heretofore or hereafter enacted, to the extent constitutionally applicable.

4. No approval, consent or authorization of any governmental or public agency, authority, commission or person, or, to our knowledge, of any holder of any outstanding bonds or other indebtedness of Purchaser, is required with respect to the execution, delivery and performance by Purchaser of the Supply Contract or Purchaser's participation in the transactions contemplated thereby other than those approvals, consents and/or authorizations that have already been obtained.

5. The authorization, execution and delivery of the Supply Contract and compliance with the provisions thereof (a) will not conflict with or constitute a breach of, or default under, (i) any instrument relating to the organization, existence or operation of Purchaser, (ii) any ruling, regulation, ordinance, judgment, order or decree to which Purchaser (or any of its officers in their respective capacities as such) is subject or (iii) any provision of the laws of the State relating to Purchaser and its affairs, and (b) to our knowledge will not result in, or require the creation or imposition of, any lien on any of the properties or revenues of Purchaser pursuant to any of the foregoing.

6. Purchaser is not in breach of or default under any applicable constitutional provision or any law or administrative regulation of the State or the United States or any applicable judgment or decree or, to our knowledge, any loan or other agreement, resolution, indenture, bond, note, resolution, agreement or other instrument to which Purchaser is a party or to which Purchaser or any of its property or assets is otherwise subject, and to our knowledge no event has occurred and is continuing which with the passage of time or the giving of notice, or both, would constitute a default or event of default under any such instrument.

7. Payments to be made by Purchaser under the Supply Contract shall constitute operating expenses of Purchaser's utility system payable solely from the revenues and other available funds of Purchaser's utility system as a cost of purchased gas. The application of the revenues and other available funds of Purchaser's utility system to make such payments is not subject to any prior lien, encumbrance or other restriction.

8. As of the date of this opinion, to the best of our knowledge after due inquiry, there is no pending or threatened action or proceeding at law or in equity or by any court, government agency, public board or body affecting or questioning the existence of Purchaser or the titles of its officers to their respective offices or affecting or questioning the legality, validity, or enforceability of this Supply Contract nor to our knowledge is there any basis therefor.

This opinion is rendered solely for the use and benefit of the addressees listed above in connection with the Supply Contract and may not be relied upon other than in connection with the transactions contemplated by the Supply Contract, or by any other person or entity for any purpose whatsoever, nor may this opinion be quoted in whole or in part or otherwise referred to in any document or delivered to any other person or entity, without the prior written consent of the undersigned.

Very truly yours,

EXHIBIT F

PRICING AND OTHER TERMS

Administrative Fee:	\$[____]/MMBtu during the Gas Delivery Period \$[____]/MWh during the Electricity Delivery Period while deliveries are only to the Primary Electricity Delivery Point
Delivery Period:	The period beginning on [____] and ending on [____], 20[____]; provided that the Delivery Period shall end immediately upon the effective termination date of the Prepaid Agreement or early termination of this Agreement pursuant to <u>Article XVII</u> hereof.
Current Reset Period:	The period beginning on [____] and ending on [____], 20[____].
Minimum Discount Percentage:	\$[____] percent ([____]%) for the Current Reset Period, and thereafter an amount no less than \$[____]/MMBtu during the Gas Delivery Period and \$[____]/MWh during the Electricity Delivery Period while deliveries are only to the Primary Electricity Delivery Point.
Monthly Discount Percentage:	[____] percent ([____]%) during the Current Reset Period, and for each Month of a Reset Period thereafter, the Monthly Discount portion of the Available Discount for such Reset Period determined by the Calculation Agent pursuant to the Re-Pricing Agreement.

EXHIBIT G-1

GAS COMMUNICATIONS PROTOCOL

1. OVERVIEW

This Communications Protocol shall apply to the Gas deliveries contemplated under the following contracts (each, a “Gas Contract” and collectively, the “Gas Contracts”):

- (a) pursuant to (i) one or more contracts identified pursuant to Section 8 of this Communications Protocol as an Upstream Supply Contract, the Upstream Supplier is obligated to deliver the Contract Quantity to J. Aron at the Delivery Points and (ii) a Limited Assignment Agreement entered into among Sacramento Municipal Utility District, a municipal utility district organized under the provisions of the Municipal Utility District Act (Division 6, Chapter 2, Articles 2 and 3, Sections 11581 through 11614 of the California Public Utilities Code, as amended) (“Participant”), an Upstream Supplier and J. Aron & Company LLC (“J. Aron”);
- (b) pursuant to that certain Commodity Purchase, Sale and Service Agreement, dated as of [____], 2024 (the “Commodity Sale and Service Agreement”), between J. Aron and Aron Energy Prepay 33 LLC (“Prepay LLC”), J. Aron is obligated to deliver the Contract Quantity to Prepay LLC at the Delivery Points;
- (c) pursuant to that certain Prepaid Commodity Sales Agreement, dated as of [____], 2024 (the “Prepaid Agreement”), between Prepay LLC and Northern California Energy Authority (“Issuer”), Prepay LLC obligated to deliver the Contract Quantity to Issuer at the Delivery Points; and
- (d) pursuant to that certain Commodity Supply Contract, dated as of [____] 1, 2024 (the “Commodity Supply Contract”), between Issuer and Participant, Issuer is obligated to deliver the Contract Quantity to Participant at the Delivery Points.

2. ADDITIONAL DEFINED TERMS

Capitalized terms used but not otherwise defined herein shall have the meaning set forth in the Prepaid Agreement as in effect on the date it is first executed or as amended with the consent of each Relevant Party that is affected by such change. References to Sections are to the Sections of this Communications Protocol, unless specifically stated otherwise. The following terms used in this Communications Protocol shall have the following meanings:

- 2.1 “Assignment Agreement” has the meaning specified in Section 8.1.
- 2.2 “Delivery Points” has the meaning specified in the Commodity Supply Contract.
- 2.3 “Delivery Scheduling Entity” means J. Aron or another Person as the Delivery Scheduling Entity designated by J. Aron as set forth in Attachment 3 or in a subsequent written notice to Issuer; *provided* that during periods when an Upstream

Supplier has been designated pursuant to Section 8, the Upstream Supplier will be the Delivery Scheduling Entity.

- 2.4 “Operational Nomination” has the meaning specified in Section 4.1.1.
- 2.5 “Receipt Scheduling Entity” means Participant unless Issuer designates another Person as set forth in Attachment 3 or in a subsequent written notice to Issuer, in which case this Communications Protocol will cease to apply to Participant.
- 2.6 “Relevant Party” means each of the Upstream Supplier, J. Aron, Prepay LLC, Issuer and Participant.
- 2.7 “Relevant Transporter” means any Transporter that will or is intended to transport Gas to be delivered or received under the Gas Contracts.
- 2.8 “Scheduling Entities” means the Receipt Scheduling Entity and the Delivery Scheduling Entity.

3. AGREEMENTS OF RELEVANT PARTIES

Each Relevant Party that is a party to a particular Gas Contract to which this Communications Protocol applies acknowledges that this Communications Protocol sets forth certain obligations that may be delegated to other Relevant Parties that are not a party to a particular Gas Contract. In connection therewith:

- 3.1 Each Relevant Party shall be entitled to rely exclusively on any communications or directions given by a Delivery Scheduling Entity or Receipt Scheduling Entity, in each case to the extent such communications are permitted hereunder;
- 3.2 Each Relevant Party will cause its counterparty to each relevant Gas Contract to comply with the provisions of this Communications Protocol as the provisions apply to such counterparty;
- 3.3 No Relevant Party will amend any provision of this Communications Protocol in a Gas Contract without the consent of each other Relevant Party; and
- 3.4 No Relevant Party will waive any provision of this Communications Protocol in a Gas Contract without the consent of each other Relevant Party whose rights or obligations would be materially and adversely affected by such waiver.

4. INFORMATION EXCHANGE AND COMMUNICATION

- 4.1 Communication of Operational Nomination Details
 - 4.1.1 Prior to each Month during which Gas is required to be delivered under the Prepaid Agreement, the Receipt Scheduling Entity shall deliver an operational nomination in writing in a form substantially similar to

Attachment 2 (the “*Operational Nomination*”) to each other Relevant Party no later than 8:30 am CPT on the second Business Day prior to the last day of exchange trading for Henry Hub Natural Gas Futures Contracts on the New York Mercantile Exchange (or any successor thereto) for deliveries in such Month. The Operational Nomination shall be delivered electronically to the notice addresses set forth on Attachment 1.

- 4.1.2 The Delivery Scheduling Entity shall update appropriate nomination details on the relevant Receipt Scheduling Entity’s Operational Nomination and forward to all other Relevant Parties by the close of the Business Day prior to nominations leaving control of the nominating Scheduling Entity for the first timely nomination cycle for the Transporters at the Delivery Points for deliveries in each Month in which Gas is to be delivered.
- 4.1.3 The Delivery Scheduling Entity shall, if necessary due to reduction during any Month, update appropriate nomination details on the relevant Receipt Scheduling Entity’s Operational Nomination and forward to all other Relevant Parties by not later than 8:00 am CPT two Business Days prior to nominations leaving control of the nominating Scheduling Entity for the first timely nomination cycle for the Transporters at the Delivery Points for deliveries on any Day or Days in which Gas is to be delivered.
- 4.1.4 The Scheduling Entities acknowledge and understand that changes to Operational Nomination details may occur after the deadline set forth in Section 4.1.1. The Scheduling Entity initiating the change will forward a revised Operational Nomination to the other Scheduling Entity (with a copy to each other Relevant Party) and the other Scheduling Entity will exercise Commercially Reasonable Efforts to accommodate such change(s). The Relevant Parties will exercise Commercially Reasonable Efforts to limit the amount of changes and accommodate requested changes at all times as allowed in the Transporter’s tariff.
- 4.1.5 For any other proposed changes to an Operational Nomination, the Scheduling Entities may initially communicate orally or via other electronic means. However, such changes will be subsequently communicated as a revised Operational Nomination as outlined above as soon as reasonably possible.

4.2 Event-Specific Communications

- 4.2.1 The Scheduling Entities shall monitor pipeline notices that are relevant to the Delivery Points and provide Commercially Reasonable notification to the other Relevant Parties of maintenance or other issues that could impact Gas flow. In such event, the Relevant Parties may designate Alternate Delivery Point(s) by mutual agreement of all of the Relevant Parties, each in its sole discretion. The designation of Alternate Delivery Point(s) by

mutual agreement may be initiated by means of oral communication between the Relevant Parties, but in such case, such Alternate Delivery Points shall be documented in writing by the Relevant Parties in compliance with the terms of the relevant Gas Contracts.

- 4.2.2 Each Scheduling Entity shall notify the other Relevant Parties as soon as practicable in the event of: (i) any deficiencies in scheduling related to such Scheduling Entity or such Scheduling Entity's Transporter; (ii) any deficiencies in scheduling related to the other such Scheduling Entity or such other Scheduling Entity's Transporter of which the notifying Scheduling Entity becomes aware; and (iii) any action taken by such Scheduling Entity's Transporter that would reasonably be expected to create issues related to Gas flow under the Prepaid Agreement.

5. ACCESS AND INFORMATION

- 5.1 The Relevant Parties agree to provide relevant records from Transporters and any other Relevant Transporters necessary to document and verify Gas flows within and after the Month as needed to facilitate settlement under the Gas Contracts.
- 5.2 Each Relevant Party acknowledges that the Scheduling Entities may not have immediate access to Gas flow information at the Delivery Points. Therefore, the Scheduling Entities will closely monitor the available nomination information at the Delivery Points and promptly notify each other upon obtaining knowledge of any discrepancies in such nomination information and the quantities required to be delivered and taken under the applicable Gas Contracts at the Delivery Points. Each Relevant Party acknowledges and agrees that the inability of a Relevant Party to immediately access Gas flow information at the Delivery Points shall not impact or be construed as a waiver of any of the rights and obligations of the Relevant Parties set forth in the applicable Gas Contract.
- 5.3 Each Scheduling Entity will use Commercially Reasonable Efforts to cooperate with J. Aron to ensure that J. Aron has sufficient agency rights from each such Scheduling Entity with respect to each Transporter to allow J. Aron to view Gas flows at the Delivery Points.

6. NOTICES

Any notice, demand, request or other communication required or authorized by this Communications Protocol to be given by one Relevant Party to another Relevant Party shall be in writing, except as otherwise expressly provided herein. It shall be sent by facsimile (with receipt confirmed by telephone and electronic transmittal receipt), email, courier, or personally delivered (including overnight delivery service) to the applicable representative of the other Relevant Party designated in Attachment 1 hereto. A Relevant Party may change its representative identified in Attachment 1 hereto at any time by written notice to each other Relevant Party. Any notice, demand, or request shall be deemed to be given (i) when sent by facsimile confirmed by telephone and electronic transmittal receipt, (ii) when sent by email

or (iii) when actually received if delivered by courier or personal delivery (including overnight delivery service). Each Relevant Party shall have the right, upon written notice to the other Relevant Parties, to change its address at any time, and to designate that copies of all such notices be directed to another Person at another address. Notwithstanding the foregoing, any Relevant Party may at any time notify the others that any notice, demand, request or communication to it must be provided by email transmission for a specified period of time or until further notice, and any communications delivered by means other than email transmission during such time shall be ineffective.

7. NO IMPACT ON CONTRACTUAL OBLIGATIONS

Except as expressly set forth herein or in an applicable Gas Contract, nothing in this Communications Protocol nor any Relevant Party's actions or inactions hereunder shall have any impact on any Relevant Party's rights or obligations under the Gas Contracts.

8. UPSTREAM SUPPLY CONTRACT

8.1 J. Aron and Participant may designate a contract as an "Upstream Supply Contract" by entering into an Assignment Agreement (as defined below) and notifying the other Relevant Parties of the execution of such Assignment Agreement; *provided* that (i) any such Upstream Supply Contract must include this Communications Protocol, (ii) any Upstream Supplier thereunder must be contract-enabled with J. Aron; (iii) any Upstream Supplier thereunder must be able to satisfy J. Aron's internal requirements as they relate to "know your customer" rules, policies and procedures, anti-money laundering rules and regulations, Dodd-Frank Act, Commodity Exchange Act, PATRIOT Act and similar rules, regulations, requirements and corresponding policies; (iv) any Upstream Supply Contract must have a delivery period of a minimum of two years; (v) any such Upstream Supplier, Participant and J. Aron must enter into a Limited Assignment Agreement substantially in the form of Attachment 4 (an "Assignment Agreement"); and (vi) an Affiliate of Participant may only act as an Upstream Supplier (a) to the extent that it is acting as a replacement supplier due to the early termination of an Upstream Supply Contract and (b) for the remaining term for deliveries under such terminated Upstream Supply Contract. An "Upstream Supplier" is the seller of Gas to J. Aron under any Upstream Supply Contract.

8.2 Not later than 180 days prior to the expiration of any Upstream Supply Contract or immediately upon the early termination of any Upstream Supply Contract, J. Aron and Participant will begin to cooperate in good faith and exercise commercially reasonable efforts to locate a replacement Upstream Supply Contract. J. Aron agrees that it will not unreasonably delay or withhold its consent to any Upstream Supply Contract proposed by Participant, provided that it shall not be unreasonable for J. Aron to withhold its consent if the proposed Upstream Supply Contract or Upstream Supplier thereunder (i) fails to satisfy the requirements set forth in Section 8.1 above or (ii) poses materially different risks to J. Aron or the other Relevant Parties (other than Participant) relative to the Upstream Supply Contract and Upstream Supplier that is being replaced (without regard to any adverse changes relating to the Upstream Supplier being replaced that arose after such

contract was initially assigned). If Participant does not propose an Upstream Supply Contract meeting the foregoing requirements by the date that is thirty (30) days prior to the expiration of an existing Upstream Supply Contract (or within ten (10) days after early termination thereof), then J. Aron may propose, but is not obligated to propose, an Upstream Supply Contract and Participant agrees that it will not unreasonably delay or withhold its consent to such Upstream Supply Contract; *provided* that it shall not be unreasonable for Participant to withhold its consent if the Upstream Supply Contract or the Upstream Supplier thereunder poses materially different risks to Participant relative to the Upstream Supply Contract and Upstream Supplier that is being replaced (without regard to any adverse changes to the Upstream Supplier being replaced that arose after such contract was initially assigned). If either Participant or J. Aron does not consent to a replacement Upstream Supply Contract prior to the expiration of an existing Upstream Supply Contract, or if an Upstream Supply Contract terminates early or if otherwise an Upstream Supply Contract is not in place at any time, then, until such time as a new Upstream Supply Contract is consented to, (i) the delivery point will be [_____] and index price will be [_____] for [____]; *provided* that J. Aron may in its reasonable discretion designate a Delivery Point Premium and modify such Delivery Point Premium from time to time while an Upstream Supply Contract is not in effect; and (ii) J. Aron will be the Delivery Scheduling Entity.

- 8.3 If the Assigned Contract Price (as defined in any Assignment Agreement) is a fixed price, the Contract Quantity for each Gas Day under the Commodity Supply Contract (and the portion of the Contract Quantity associated therewith under the Prepaid Agreement and the Commodity Sale and Service Agreement) shall equal the (i) Contract Quantity for each Gas Day of the applicable Assignment Period (as defined in the relevant Assignment Agreement) *multiplied by* (ii) the result of (A) the relevant Assigned Contract Price, *divided by* (B) ***[NOTE: To list the result of the following formula as determined at pricing: Front End Fixed Price + (Active Swap Fee – Standby Swap Fee).]*** For the avoidance of doubt, such updates to the Contract Quantities shall only apply for the relevant Assignment Period, and, in the event of an early termination of any such Assignment Period, such adjusted Contract Quantities shall be reversed effective as of the first day of the second Month following the Month in which such early termination occurs.
- 8.4 The declaration of “Force Majeure” by an Upstream Supplier under an Upstream Supply Contract shall be deemed Force Majeure for purposes of each of the Gas Contracts.

9. ATTACHMENTS

Attachment 1 – Notices and Key Personnel

Attachment 2 – Form of Operational Nomination (Monthly)

Attachment 3 – Designation of Scheduling Entities Form

Attachment 4 – Form of Limited Assignment Agreement

ATTACHMENT 1

Notices and Key Personnel

J. Aron & Company LLC Scheduling Personnel:

J. Aron & Company LLC
200 West Street
New York, NY 10282
Scheduling Team
Email: ficc-jaron-natgasops@ny.email.gs.com; gs-prepay-notices@gs.com
Direct Phone: (212) 902-8148
Fax: (212) 493-9847

And to:

Matt Speltz
ICE Chat: mspeltz5
Email: gs-prepay-notices@gs.com
Direct Phone: (212) 357-5429
Fax: (212) 493-9847

Prepay LLC Scheduling Personnel:

Aron Energy Prepay 33 LLC

c/o J. Aron & Company LLC
200 West Street
New York, NY 10282
Scheduling Team
Email: ficc-jaron-natgasops@ny.email.gs.com; gs-prepay-notices@gs.com
Direct Phone: (212) 902-8148
Fax: (212) 493-9847

And to:

Matt Speltz
ICE Chat: mspeltz5
Email: gs-prepay-notices@gs.com
Direct Phone: (212) 357-5429
Fax: (212) 493-9847

Buyer Personnel:

Northern California Energy Authority
c/o Sacramento Municipal Utility District

Attention: Power Contracts Administration
6301 S Street
Sacramento, CA 95817-1899
Phone: (916) 732-6244
Email: PowerContractsAdmin@smud.org

Gas Related:
916-732-7140
GasTrading@smud.org

Invoicing/Payments:
916-732-6751
EnergySettlements@smud.org

Northern California Energy Authority
Sacramento Municipal Utility District
Attention: Power Contracts Administration
6301 S Street
Sacramento, CA 95817-1899
Phone: (916) 732-6244
Email: PowerContractsAdmin@smud.org

Gas Related:
916-732-7140
GasTrading@smud.org

Invoicing/Payments:
916-732-6751
EnergySettlements@smud.org

Upstream Supplier Scheduling:

As provided by any applicable Upstream Supplier.

ATTACHMENT 2

Form of Operational Nomination (Monthly)

Month: _____, 20__

<u>Pipeline</u>	<u>Delivery Point</u>	<u>Pipeline Meter Number</u>	<u>Pipeline Meter Name</u>	<u>Upstream Info</u>	<u>Upstream Duns</u>	<u>Downstream Info</u>	<u>Downstream Duns</u>	<u>Daily Contract Volume</u>	<u>Daily Remarketed Volume</u>	<u>Daily Nominated Volume</u>	<u>Monthly Contractual Volume</u>	<u>Monthly Remarketed Volume</u>	<u>Monthly Nominated Volume</u>
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[] []

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Totals

ATTACHMENT 3

Designation of Scheduling Entities Form

<p>Receipt Scheduling Entity:</p> <p>Delivery Point: _____</p> <p>Percentage of Contract Quantity for Delivery Point that may be scheduled and nominated by Receipt Scheduling Entity: _____</p> <p>Effective Date(s) of Service of Receipt Scheduling Entity (full Months only): _____, _____ to _____, _____, if applicable</p> <p>Notice Information for Receipt Scheduling Entity:</p> <p>Name: _____</p> <p>Attention: _____</p> <p>Address: _____</p> <p>Telephone: _____</p> <p>Fax: _____</p>
<p>Delivery Scheduling Entity:</p> <p>Delivery Point: _____</p> <p>Effective Date(s) of Service of Delivery Scheduling Entity (full Months only): _____, _____ to _____, _____, if applicable</p> <p>Notice Information for Delivery Scheduling Entity:</p> <p>Name: _____</p> <p>Attention: _____</p> <p>Address: _____</p> <p>Telephone: _____</p> <p>Fax: _____</p>

Submitted by Issuer:

NORTHERN CALIFORNIA ENERGY AUTHORITY

By: _____

Name:

Title:

Submitted by J. Aron:

J. ARON & COMPANY LLC

By: _____

Name:

Title:

ATTACHMENT 4

FORM OF LIMITED ASSIGNMENT AGREEMENT

This Limited Assignment Agreement (this “**Agreement**”) is entered into as of [____] by and among [____] (“**Upstream Supplier**”), SACRAMENTO MUNICIPAL UTILITY DISTRICT (“**Participant**”) and J. Aron & Company LLC (“**J. Aron**”).

RECITALS

WHEREAS, Participant and Upstream Supplier are parties to that certain Base Contract for Sale and Purchase of Natural Gas, dated [____], 202[____], the Special Provisions dated [____], 202[____] and the Transaction Confirmation thereto dated [____], 202[____] (the “**Upstream Supply Contract**”);

WHEREAS, with effect from and including the Assignment Period Start Date (as defined below), Participant wishes to transfer by partial assignment to J. Aron, and J. Aron wishes to accept the transfer by partial assignment of, the Assigned Rights and Obligations (as defined below) for the duration of the Assignment Period (as defined below);

THEREFORE, in consideration of the premises above and the mutual covenants and agreements herein set forth, Upstream Supplier, Participant and J. Aron (the “**Parties**” hereto; each is a “**Party**”) agree as follows:

Section 1. Definitions.

The following terms, when used in this Agreement and identified by the capitalization of the first letter thereof, have the respective meanings set forth below, unless the context otherwise requires:

“**Agreement**” has the meaning specified in the first paragraph above.

“**Assigned Contract Price**” has the meaning specified in Appendix 1.

“**Assigned Daily Quantity**” has the meaning specified in Appendix 1.

“**Assigned Delivery Point**” has the meaning specified in Appendix 1.

“**Assigned Gas**” means any Gas to be delivered to J. Aron hereunder pursuant to the Assigned Rights and Obligations.

“**Assigned Rights and Obligations**” means (i) the rights of Participant under the Upstream Supply Contract to receive the Assigned Daily Quantity of Assigned Gas on each Day during the Assignment Period, and (ii) the Delivered Gas Payment Obligation, which right and obligation are transferred and conveyed to J. Aron hereunder.

“**Assignment Early Termination Date**” has the meaning specified in Section 5(b).

“**Assignment Period**” has the meaning specified in Section 5(a).

“**Assignment Period End Date**” means [_____].

“**Assignment Period Start Date**” means [_____].

“**Business Day**” has the meaning specified in the Prepaid Agreement.

“**Claims**” means all claims or actions, threatened or filed, and the resulting losses, damages, expenses, attorneys’ fees, experts’ fees, and court costs, whether incurred by settlement or otherwise, and whether such claims or actions are threatened or filed prior to or after the termination of this Agreement.

“**Delivered Gas Payment Obligation**” has the meaning specified in Section 3(a).

“**Gas**” means any mixture of hydrocarbons and noncombustible gases in a gaseous state consisting primarily of methane.

“**Gas Contracts**” means the Commodity Sale and Service Agreement, the Prepaid Agreement and the Commodity Supply Contract.

“**Commodity Sale and Service Agreement**” means that certain Commodity Purchase, Sale and Service Agreement dated [_____] 1, 2024 by and between J. Aron and Prepay LLC.

“**Commodity Supply Contract**” means that certain Commodity Supply Contract dated [_____] 1, 2024 by and between Participant and Issuer.

“**Government Agency**” means the United States of America, any state thereof, any municipality, or any local jurisdiction, or any political subdivision of any of the foregoing, including, but not limited to, courts, administrative bodies, departments, commissions, boards, bureaus, agencies, or instrumentalities.

“**ISDA U.S. Stay Protocol**” has the meaning specified in Section 11(d).

“**Issuer**” means Northern California Energy Authority.

“**Month**” means a calendar month.

“**J. Aron**” has the meaning specified in the first paragraph of this Agreement.

“**Participant**” has the meaning specified in the first paragraph of this Agreement.

“**Person**” means any individual, corporation, partnership, joint venture, trust, unincorporated organization, or Government Agency.

“**Prepaid Agreement**” means that certain Amended & Restated Prepaid Commodity Sales Agreement dated as of [_____] 1, 2024 by and between Prepay LLC and Issuer.

“**Prepay LLC**” means Aron Energy Prepay 33 LLC, a Delaware limited liability company.

“**Receivables**” has the meaning given to such term in Section 3(d).

“**Retained Rights and Obligations**” has the meaning specified in Section 3.

“**Upstream Supplier**” has the meaning specified in the first paragraph of this Agreement.

“**Upstream Supply Contract**” has the meaning specified in the recitals of this Agreement.

Section 2. Transfer and Undertakings.

- (a) Participant hereby assigns, transfers and conveys to J. Aron all right, title and interest in and to the Assigned Rights and Obligations during the Assignment Period.
- (b) Upstream Supplier hereby consents and agrees to Participant’s assignment, transfer and conveyance of all right, title and interest in and to the Assigned Rights and Obligations to J. Aron and the exercise by J. Aron of the Assigned Rights and Obligations during the Assignment Period.
- (c) J. Aron hereby accepts such assignment, transfer and conveyance of the Assigned Rights and Obligations during the Assignment Period and agrees to perform any such Assigned Rights and Obligations due from it during the Assignment Period to the extent expressly set forth in this Agreement.

Section 3. Limited Assignment.

The Parties acknowledge and agree that (i) the Assigned Rights and Obligations include only a portion of Participant’s and Upstream Supplier’s rights and obligations under the Upstream Supply Contract, and that all rights and obligations arising under the Upstream Supply Contract that are not expressly included in the Assigned Rights and Obligations shall be “**Retained Rights and Obligations**”, and (ii) the Retained Rights and Obligations include all rights and obligations of Participant and Upstream Supplier arising during the Assignment Period except the rights and obligations expressly included in the Assigned Rights and Obligations. In this regard:

(a) **Limited to Delivered Gas Payment Obligation.** J. Aron’s sole obligation to Upstream Supplier will be to pay the Assigned Contract Price to Upstream Supplier for the Assigned Gas delivered on each Day of the Assignment Period on each applicable payment date under the Upstream Supply Contract for a quantity up to, but not exceeding, the Assigned Daily Quantity (the “**Delivered Gas Payment Obligation**”) Participant shall remain obligated to pay Upstream Supplier for all quantities and at the price specified in the Upstream Supply Contract, but Upstream Supplier shall credit the Delivered Gas Payment Obligation against the amounts otherwise due from Participant under the Upstream Supply Contract for each Day of the Assignment Period, and Participant shall remain solely responsible for any payment obligations under the Upstream Supply Contract other than the Delivered Gas Payment Obligation during the Assignment Period.

(b) **Retained Rights and Obligations.** Any Claims (other than the Delivered Gas Payment Obligation or a failure to perform the same) arising or existing in connection with or related to the Upstream Supply Contract, whether related to performance by the Upstream

Supplier, Participant or J. Aron, and whether arising before, during or after the Assignment Period, in each case excluding the Delivered Gas Payment Obligation, will be included in the Retained Rights and Obligations and any such Claims will be resolved exclusively between the Upstream Supplier and Participant in accordance with the Upstream Supply Contract. For the avoidance of doubt, the Parties acknowledge and agree that (i) Participant shall remain solely responsible for any amounts due under the Upstream Supply Contract as a result of Participant scheduling or otherwise taking less than the Assigned Daily Quantity for any reason on any Day during the Assignment Period, including as a result of exercising any rights it may have under the Commodity Supply Contract to reduce its daily deliveries upon notice and (ii) any invoice adjustments or reconciliations occurring after the initial settlement of amounts due under a monthly invoice shall be resolved solely between Upstream Supplier and Participant.

(c) **Scheduling.** All scheduling of Gas and other communications related to the Upstream Supply Contract shall take place between Participant and Upstream Supplier pursuant to the terms of the Upstream Supply Contract; provided that (i) Participant and Upstream Supplier will provide copies of all billing statements delivered during the Assignment Period to J. Aron and Issuer contemporaneously upon delivery of such statements to the other party to the Upstream Supply Contract; (ii) title to Assigned Gas will pass to J. Aron upon delivery by Upstream Supplier at the Assigned Delivery Point in accordance with the Upstream Supply Contract; (iii) immediately thereafter, title to such Assigned Gas will pass to Prepay LLC, Issuer and then to Participant upon delivery by J. Aron at the same point where title is passed to J. Aron pursuant to clause (ii) above; and (iv) Participant will be deemed to be acting as J. Aron's agent with regard to scheduling Assigned Gas.

(d) **Setoff of Receivables.** Pursuant to the Prepaid Agreement, Prepay LLC has agreed to purchase the rights to payment of the net amounts owed by Participant under the Commodity Supply Contract ("**Receivables**") in the case of non-payment by Participant. To the extent any such Receivables relate to Assigned Gas purchased by J. Aron pursuant to the Assigned Rights and Obligations, Prepay LLC may sell such Receivables to J. Aron and J. Aron may transfer such Receivables to Upstream Supplier and apply the face amount of such Receivables as a reduction to any Delivered Gas Payment Obligations; provided, however, that at no time shall Upstream Supplier be required to pay J. Aron for any amounts by which such Receivables exceed any Delivered Gas Payment Obligations then due and owed to Upstream Supplier. To effect such transfer, J. Aron shall deliver to Upstream Supplier a notice of intent to transfer Receivables not later than the payment due date for the Delivered Gas Payment Obligations and shall deliver to Upstream Supplier a bill of sale signed by J. Aron not later than five Business Days thereafter.

(e) **Amendments.** Neither Participant nor Upstream Supplier will consent to any amendment, waiver, supplement or other modification to the Upstream Supply Contract that would in any way affect the Assigned Rights and Obligations or J. Aron's rights or obligations under this Assignment Agreement without J. Aron's prior written consent, which consent may be withheld in J. Aron's sole discretion. Participant and Upstream Supplier will provide written notice (including copies thereof) of any other proposed or actual amendment, waiver, supplement, modification, or other changes to the Upstream Supply Contract to J. Aron prior to the effectiveness thereof.

(f) **Ledger Entries and Remediation.** To the extent that Upstream Supplier delivers less than the Assigned Daily Quantity on any Day during the Assignment Period for any reason other than Force Majeure, Prepay LLC will be deemed under the Prepaid Agreement to remarket such portion of the Assigned Daily Quantity on Issuer's behalf, resulting in a Ledger Entry (as defined in the Prepaid Agreement). Until any such Ledger Entry has been fully remediated, Participant agrees that it will apply any purchases it makes under the Upstream Supply Contract in excess of the Assigned Daily Quantity to remediate such Ledger Entries and deliver a remediation certificate in the form of Appendix 4 to J. Aron and Issuer in the Month following any such remediation purchase.

Section 4. Forward Contract.

The Parties acknowledge and agree that this Agreement constitutes a "forward contract" and that the Parties shall constitute "forward contract merchants" within the meaning of the United States Bankruptcy Code.

Section 5. Assignment Period; Assignment Early Termination.

(a) **Assignment Period.** The "Assignment Period" shall begin on the Assignment Period Start Date and extend until the Assignment Period End Date; provided that in no event shall the Assignment Period extend past an Assignment Early Termination Date.

(b) **Early Termination.** An "Assignment Early Termination Date" will occur under the following circumstances and as of the dates specified below:

- i. the assignment of the Commodity Supply Contract by any party thereto, which Assignment Early Termination Date shall occur immediately as of the time of such assignment;
- ii. the suspension, expiration, or termination of performance under the Upstream Supply Contract for any reason other than the occurrence of Force Majeure under and as defined in the Upstream Supply Contract, which Assignment Early Termination Date shall occur immediately as of the time of Upstream Supplier's last performance under the Upstream Supply Contract following such suspension, expiration, or termination;
- iii. termination or suspension of deliveries for any reason other than force majeure under any of the Gas Contracts, which Assignment Early Termination Date shall occur immediately as of the time of the last deliveries under the relevant contract following such suspension or termination;
- iv. the election of J. Aron in its sole discretion to declare an Assignment Early Termination Date as a result of (A) any event or circumstance that would give either Participant or Upstream Supplier the right to terminate or suspend performance under the Upstream Supply Contract (regardless of whether Participant or Upstream Supplier exercises such right) or (B) the execution of an amendment, waiver, supplement, modification or other change to the Upstream Supply Contract that adversely affects the Assigned Rights and Obligations or J. Aron's rights or

obligations under this Agreement (provided that J. Aron shall not have a right to terminate under this clause (b) to the extent that J. Aron (I) receives prior notice of such change and (II) provides its written consent thereto), which Assignment Early Termination Date shall occur upon the date set forth in a written notice of such election delivered by J. Aron to Participant and Upstream Supplier;

- v. the election of Upstream Supplier in its sole discretion to declare an Assignment Early Termination Date if J. Aron fails to pay when due any amounts owed to Upstream Supplier in respect of any Delivered Gas Payment Obligation and such failure continues for five Business Days following receipt by J. Aron of written notice thereof, which Assignment Early Termination Date shall occur upon the date set forth in a written notice of such election delivered by Upstream Supplier to J. Aron and Participant; or
- vi. the election of Upstream Supplier in its sole discretion to declare an Assignment Early Termination Date if either (a) an involuntary case or other proceeding is commenced against J. Aron seeking liquidation, reorganization or other relief with respect to it or its debts under any applicable Federal or State bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium or similar law now or hereafter in effect or seeking the appointment of a custodian, receiver, liquidator, assignee, trustee, sequestrator or similar official of it or any substantial part of its property, and such involuntary case or other proceeding shall remain undismissed and unstayed, or an order or decree approving or ordering any of the foregoing is entered and continued unstayed and in effect, in any such event, for a period of 60 days, or (b) J. Aron commences a voluntary case or proceeding under any applicable Federal or State bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium or other similar law or any other case or proceeding to be adjudicated as bankrupt or insolvent, or J. Aron consents to the entry of a decree or order for relief in an involuntary case or proceeding under any applicable Federal or State bankruptcy, insolvency, reorganization or other similar law or to the commencement of any bankruptcy or insolvency case or proceeding against it, files a petition or answer or consent seeking reorganization or relief under any applicable Federal or State law, or consents to the filing of such petition or to the appointment of or taking possession by a custodian, receiver, liquidator, assignee, trustee, sequestrator or similar official of J. Aron or any substantial part of its property, or makes an assignment for the benefit of creditors, or admits in writing its inability to pay its debts generally as they become due, which Assignment Early Termination Date shall occur immediately on the date of Upstream Supplier's delivery of notice of its election to J. Aron and Participant.

(c) **Reversion of Assigned Rights and Obligations.** The parties acknowledge and agree that upon the occurrence of an Assignment Early Termination Date the Assigned Rights and Obligations will revert from J. Aron to Participant. Any Assigned Rights and Obligations that would become due for payment or performance on or after such Assignment Early Termination Date shall immediately and automatically revert from J. Aron to Participant, provided that (i) J. Aron shall remain responsible for the Delivered Gas Payment Obligation with respect to any Gas delivered to J. Aron prior to the Assignment Early Termination Date, and (ii) any legal restrictions

on the effectiveness of such reversion (whether arising under bankruptcy law or otherwise) shall not affect the occurrence of the Assignment Early Termination Date.

Section 6. Representations and Warranties.

(a) **Copy of Upstream Supply Contract.** Upstream Supplier and Participant represent and warrant to J. Aron that a true, complete, and correct copy of the Upstream Supply Contract is attached hereto as Appendix 3.

(b) **No Default.** Upstream Supplier and Participant represent and warrant to J. Aron that no event or circumstance exists (or would exist with the passage of time or the giving of notice) that would give either of them the right to terminate the Upstream Supply Contract or suspend performance thereunder.

(c) **Other.** Each of Participant and Upstream Supplier represents and warrants to each other and to J. Aron that:

- (1) it has made no prior transfer (whether by way of security or otherwise) of any interest in the Assigned Rights and Obligations; and
- (2) all obligations of Participant and Upstream Supplier under the Upstream Supply Contract required to be performed on or before the Assignment Period Start Date have been fulfilled.

(d) **Representations.** Each Party represents to each of the other Parties:

- (1) **Status.** It is duly organized and validly existing under the laws of the jurisdiction of its organization or incorporation and, if relevant under such laws, in good standing.
- (2) **Powers.** It has the power to execute this Agreement and any other documentation relating to this Agreement to which it is a party, to deliver this Agreement and any other documentation relating to this Agreement that it is required by this Agreement to deliver and to perform its obligations under this Agreement and has taken all necessary action to authorize such execution, delivery and performance.
- (3) **No Violation or Conflict.** Such execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby, including the incurrence by such Party of its obligations under this Agreement, will not result in any violation of, or conflict with: (i) any term of any material contract or agreement applicable to it; (ii) any of its charter, bylaws, or other constitutional documents; (iii) any determination or award of any arbitrator applicable to it; or (iv) any license, permit, franchise, judgment, writ, injunction or regulation, decree, order, charter, law, ordinance, rule or regulation of any Government Agency, applicable to it or any of its assets or properties or to any obligations incurred by it or by which it or any of its assets or properties or obligations are bound or affected, and

shall not cause a breach of, or default under, any such term or result in the creation of any lien upon any of its properties or assets.

- (4) **Consents.** All consents, approvals, orders or authorizations of; registrations, declarations, filings or giving of notice to; obtaining of any licenses or permits from; or taking of any other action with respect to, any Person or Government Agency, that are required to have been obtained or made by such Party with respect to this Agreement and the transactions contemplated hereby, including the due authorization of such Party and its governing body and any approval or consent of any security holder of such Party or any holder (or any trustee for any holder) of any indebtedness or other obligation of such Party, have been obtained and are in full force and effect and all conditions of any such consents have been complied with.
- (5) **Obligations Binding.** Its obligations under this Agreement constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law)).
- (6) **Non-Reliance.** It is acting for its own account, and it has made its own independent decisions to enter into this Agreement and as to whether this Agreement is appropriate or proper for it based upon its own judgment and upon advice from such advisers as it has deemed appropriate. It is not relying on any communication (written or oral) of the other Parties as investment advice or as a recommendation to enter into this Agreement, it being understood that information and explanations related to the terms and conditions of this Agreement shall not be considered investment advice or a recommendation to enter into this Agreement. It is entering into this Agreement as a bona-fide, arm's-length transaction involving the mutual exchange of consideration and, once executed by all Parties, considers this Agreement a legally enforceable contract. No communication (written or oral) received from any of the other Parties shall be deemed to be an assurance or guarantee as to the expected results of this Agreement.
- (7) **Assessment and Understanding.** It is capable of assessing the merits of and understanding (on its own behalf or through independent professional advice), and understands and accepts, the terms, conditions and risks of this Agreement. It is also capable of assuming, and assumes, the risks of this Agreement.
- (8) **Status of Parties.** None of the other Parties is acting as a fiduciary for or an adviser to it in respect of this Agreement.

Section 7. Counterparts.

This Agreement (and each amendment, modification and waiver in respect of it) may be executed and delivered in counterparts (including by email), each of which will be deemed an original.

Section 8. Costs and Expenses.

The Parties will each pay their own costs and expenses (including legal fees) incurred in connection with this Agreement and as a result of the negotiation, preparation, and execution of this Agreement.

Section 9. Amendments.

No amendment, modification, or waiver in respect of this Agreement will be effective unless in writing and executed by each of the Parties.

Section 10. Notices.

Any notice, demand, statement or request required or authorized by this Agreement to be given by one Party to another shall be in writing, except as otherwise expressly provided herein. It shall be sent by email transmission, courier, or personal delivery (including overnight delivery service) to each of the notice recipients and addresses for each of the other Parties designated in Appendix 2 hereto. Any such notice, demand, or request shall be deemed to be given (i) when sent by email transmission, or (ii) when actually received if delivered by courier or personal delivery (including overnight delivery service). Each Party shall have the right, upon written 10 days' prior written notice to the other Parties, to change its address at any time, and to designate that copies of all such notices be directed to another person at another address. The Parties may mutually agree in writing at any time to deliver notices, demands or requests through alternate or additional methods. Notwithstanding the foregoing, a Party may at any time notify the other Parties that any notice, demand, statement or request to it must be provided by email transmission for a specified period of time or until further notice, and any communications delivered by means other than email transmission during the specified period of time shall be ineffective.

Section 11. Miscellaneous.

(a) **Governing Law.** THIS AGREEMENT AND THE RIGHTS AND DUTIES OF THE PARTIES UNDER THIS AGREEMENT WILL BE GOVERNED BY AND CONSTRUED, ENFORCED AND PERFORMED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REFERENCE TO ANY CONFLICTS OF LAWS PROVISIONS THAT WOULD DIRECT THE APPLICATION OF ANOTHER JURISDICTION'S LAWS; PROVIDED THAT THE AUTHORITY OF PARTICIPANT TO ENTER INTO AND PERFORM ITS OBLIGATIONS UNDER THIS AGREEMENT SHALL BE DETERMINED IN ACCORDANCE WITH THE LAWS OF THE STATE OF [____].

(b) **Jurisdiction.** ALL JUDICIAL PROCEEDINGS BROUGHT AGAINST ANY PARTY ARISING OUT OF OR RELATING HERETO SHALL BE BROUGHT EXCLUSIVELY IN (A) THE COURTS OF THE STATE OF NEW YORK LOCATED IN THE BOROUGH OF MANHATTAN, (B) THE FEDERAL COURTS OF THE UNITED STATES OF AMERICA FOR THE SOUTHERN DISTRICT OF NEW YORK OR (C) THE FEDERAL COURTS OF THE UNITED STATES OF AMERICA IN ANY OTHER STATE. BY

EXECUTING AND DELIVERING THIS AGREEMENT, EACH PARTY IRREVOCABLY ACCEPTS GENERALLY AND UNCONDITIONALLY THE EXCLUSIVE JURISDICTION AND VENUE OF SUCH COURTS; WAIVES ANY DEFENSE OF *FORUM NON CONVENIENS*; AGREES THAT SERVICE OF ALL PROCESS IN ANY SUCH PROCEEDING IN ANY SUCH COURT MAY BE MADE BY REGISTERED OR CERTIFIED MAIL, RETURN RECEIPT REQUESTED, TO THE PARTY AT ITS ADDRESS PROVIDED IN ACCORDANCE WITH SECTION 10; AND AGREES THAT SERVICE AS PROVIDED ABOVE IS SUFFICIENT TO CONFER PERSONAL JURISDICTION OVER THE PARTY IN ANY SUCH PROCEEDING IN ANY SUCH COURT, AND OTHERWISE CONSTITUTES EFFECTIVE AND BINDING SERVICE IN EVERY RESPECT.

(c) **Waiver of Right to Trial by Jury.** EACH PARTY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY SUIT, ACTION OR PROCEEDING RELATING TO THIS AGREEMENT. EACH PARTY (I) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF EITHER OF THE OTHER PARTIES HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF SUCH A SUIT ACTION OR PROCEEDING, SEEK TO ENFORCE THE FOREGOING WAIVER AND (II) ACKNOWLEDGES THAT IT AND EACH OF THE OTHER PARTIES HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 11(C).

(d) **U.S. Resolution Stay Provisions.** The Parties hereby confirm that they are adherents to the ISDA 2018 U.S. Resolution Stay Protocol (“ISDA U.S. Stay Protocol”), the terms of the ISDA U.S. Stay Protocol are incorporated into and form a part of this Agreement, and for the purposes of such incorporation, (i) J. Aron shall be deemed to be a Regulated Entity, (ii) each of Participant and Upstream Supplier shall be deemed to be an Adhering Party, and (iii) this Agreement shall be deemed a Protocol Covered Agreement. In the event of any inconsistencies between this Agreement and the ISDA U.S. Stay Protocol, the ISDA U.S. Stay Protocol will prevail.

IN WITNESS WHEREOF, the Parties have executed this Agreement effective as of the date first set forth above.

J. ARON & COMPANY LLC

By: _____

Name: _____

Title: _____

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____

Name: _____

Title: _____

[UPSTREAM SUPPLIER]

By: _____

Name: _____

Title: _____

Appendix 1

Assigned Rights and Obligations

Assigned Daily Quantity: [_____]

Assigned Contract Price: [_____]

Assigned Delivery Point: [_____]

Appendix 2

Notice Information

[To be completed before signing.]

Appendix 3

Copy of Upstream Supply Contract

[To be attached.]

EXHIBIT G-2
ELECTRICITY COMMUNICATIONS PROTOCOL

This Exhibit G-2 (“Communications Protocol”) addresses the Scheduling of Electricity to be delivered to and received at the Delivery Point under the Agreement. It is intended to be attached to the Prepaid Agreement and each Participant Contract, each as defined below.

1. ADDITIONAL DEFINED TERMS

In addition to the terms defined in Article I of this Agreement, the following terms used in this Communications Protocol shall have the following meanings:

- 1.1 “Agreement” means (i) when this Communications Protocol is attached to the Prepaid Agreement, the Prepaid Agreement and (ii) when this Communications Protocol is attached to a Participant Contract, the Participant Contract.
- 1.2 “Beneficiary” has the meaning specified in Section 2.3.
- 1.3 “Burdened Party” has the meaning specified in Section 2.3.
- 1.4 “Buyer” has the meaning specified in the Prepaid Agreement.
- 1.5 “Delivery Scheduling Entity” means for each Delivery Point, J. Aron or a Person designated for such Delivery Point by J. Aron, as set forth in Attachment 4 or in a subsequent written notice to Buyer and the relevant Project Participant.
- 1.6 “Notified Party” has the meaning specified in Section 5.1.
- 1.7 “Notifying Party” has the meaning specified in Section 5.1.
- 1.8 “Operational Nomination” has the meaning specified in Section 4.1.1.
- 1.9 “Participant Contract” means (i) when this Communications Protocol is attached to the Prepaid Agreement, each Commodity Supply Contract and (ii) when this Communications Protocol is attached to a Participant Contract, the agreement to which it is attached.
- 1.10 “Prepaid Agreement” means the Amended & Restated Prepaid Commodity Sales Agreement, dated as of [____], 2024 by and between J. Aron and Buyer.
- 1.11 “Project Participant” means the “Purchaser” under each Participant Contract.
- 1.12 “Receipt Scheduling Entity” the Project Participant, unless the Participant Contract has been suspended or terminated, in which case the Receipt Scheduling Entity will be Buyer or a Person designated by Buyer for such Delivery Point in accordance with this Communications Protocol.
- 1.13 “Relevant Contract” means the Prepaid Agreement and the Participant Contract.

- 1.14 “Relevant Party” means Buyer, J. Aron and the Project Participant.
- 1.15 “Relevant Third Party” means any Person that is (i) a Transmission Provider that will or is intended to transport Electricity to be delivered or received under the Agreement, (ii) an independent system operator or control area that coordinates the Scheduling of Electricity at the Delivery Point, (iii) Scheduling at the receiving Electricity from Buyer or for the account of Buyer to the extent such Electricity has been delivered to Buyer or for the account of Buyer under the Commodity Supply Contract, and (iv) delivering Electricity to Seller or for the account of Seller to the extent such Electricity is intended to be re-delivered ultimately to the Project Participant or for the account of the Project Participant under the Commodity Supply Contract.
- 1.16 “Scheduling Entities” means the Receipt Scheduling Entities and the Delivery Scheduling Entities.
- 1.17 “Seller” has the meaning specified in the Prepaid Agreement.

2. AGREEMENTS OF RELEVANT PARTIES

Each Relevant Party that is a party to a Relevant Contract to which this Communications Protocol is attached acknowledges that this Communications Protocol sets forth certain obligations that may be delegated to other Relevant Parties that are not parties to such Relevant Contracts. In connection therewith:

- 2.1 Each Relevant Party shall be entitled to rely exclusively on any communications or directions given by a Delivery Scheduling Entity or Receipt Scheduling Entity, in each case to the extent such communications are permitted hereunder;
- 2.2 Each Relevant Party will cause its counterparty to each Relevant Contract to comply with the provisions of this Communications Protocol as the provisions apply to the such counterparty;
- 2.3 To the extent this Communications Protocol purports to give any Relevant Party (a “Beneficiary”) rights *vis-à-vis* any other Relevant Party (a “Burdened Party”) with whom such Beneficiary does not have privity under Relevant Contract, such Beneficiary shall be deemed to be a third-party beneficiary of each Relevant Contract to which the Burdened Party is a party;
- 2.4 No Relevant Party may amend, waive or otherwise modify any provision of Relevant Contract to which it is a party without the consent of each other Relevant Party whose rights or obligations would be materially and adversely affected by such amendment, waiver or modification as it relates to this Communications Protocol;
- 2.5 No Relevant Party will amend any provision of this Communications Protocol in Relevant Contract without the consent of each other Relevant Party; and

- 2.6 No Relevant Party will waive any provision of this Communications Protocol in Relevant Contract without the consent of each other Relevant Party whose rights or obligations would be materially and adversely affected by such waiver.

3. DESIGNATION AND REPLACEMENT OF SCHEDULING ENTITIES

- 3.1 J. Aron may designate a new Delivery Scheduling Entity upon thirty (30) days written notice to Buyer substantially in the form of Attachment 4. Any Scheduling Entity designated in accordance with this Section 3.1 shall commence service at the beginning of a Month, unless mutually agreed in writing between J. Aron and Buyer.
- 3.2 If any Delivery Scheduling Entity (other than J. Aron) persistently fails to perform its obligations as contemplated under this Communications Protocol, the Receipt Scheduling Entity may, by notice to J. Aron, require that J. Aron deal directly with the Receipt Scheduling Entity until a new Delivery Scheduling Entity is designated in accordance with Section 3.1.
- 3.3 Project Participant shall designate a scheduling coordinator for the purposes of accepting Electricity delivery at Primary Electricity Delivery Points and Secondary Electricity Delivery Points through the scheduling of ISTs.

4. INFORMATION EXCHANGE AND COMMUNICATION BETWEEN BUYER AND J. ARON

4.1 Communication of Operational Nomination Details

- 4.1.1 Not later than 15 days prior to each day during which Electricity is required to be delivered under the Agreement, the Receipt Scheduling Entity for such Delivery Point may deliver an operational nomination in writing (the “Operational Nomination”) indicating any inability of a Project Participant to receive all of its Hourly Quantities during such day, which Operational Nomination shall be without prejudice to any party’s rights under the Relevant Agreements for failure to receive Hourly Quantities. If no changes to Hourly Quantities are so submitted, the Operational Nomination shall be deemed to nominate the full Hourly Quantities required to be delivered on a day.
- 4.1.2 Not later than 15 days prior to each day during which Electricity is required to be delivered under the Agreement, the Delivery Scheduling Entity for such Delivery Point may revise the Operational Nomination to indicate any inability of Seller to deliver all Hourly Quantities during such day, which revised Operational Nomination shall be without prejudice to any party’s rights under the Relevant Agreements for failure to deliver Hourly Quantities.

4.2 Event-Specific Communications

- 4.2.1 Remarketing Notices issued by Buyer under the Prepaid Agreement shall be substantially in the form of Attachment 2. Any such notices to remarket must be delivered directly to Seller and the Delivery Scheduling Entity.
- 4.2.2 Each Scheduling Entity shall notify Seller, Buyer and the Project Participant as soon as practicable in the event of: (i) any deficiencies in Scheduling related to such Scheduling Entity; (ii) any deficiencies in Scheduling related to the other such Scheduling Entity; and (iii) any issues with Relevant Third Parties that that would reasonably be expected to create issues related to Electricity Scheduling under the Relevant Agreement.

5. ACCESS AND INFORMATION

- 5.1 In addition to the delivery of and access to the records and data required pursuant to the Agreement, each Relevant Party agree to provide relevant records from itself and other Relevant Third Parties necessary to document and verify Electricity Scheduled within and after the Month as needed to facilitate the Electricity Agreements.
- 5.2 To the extent requested by a Delivery Scheduling Entity or J. Aron, the Receipt Scheduling Entities will use Commercially Reasonable Efforts to cooperate with the Delivery Scheduling Entity and J. Aron to ensure that Delivery Scheduling Entity and J. Aron has sufficient agency view rights from each such Scheduling Entity to allow Seller to view Electricity Scheduling at the Delivery Point.

6. NOTICES

Any notice, demand, request or other communication required or authorized by this Communications Protocol to be given by one Relevant Party to another Relevant Party shall be in writing, except as otherwise expressly provided herein. It shall either be sent by facsimile (with receipt confirmed by telephone and electronic transmittal receipt), courier, or personally delivered (including overnight delivery service) to the representative of the other Relevant Party designated in Attachment 1 hereto. Any such notice, demand, or request shall be deemed to be given (i) when sent by facsimile confirmed by telephone and electronic transmittal receipt, (ii) when actually received if delivered by courier or personal delivery (including overnight delivery service). Each Relevant Party shall have the right, upon written notice to the other Relevant Parties, to change its address at any time, and to designate that copies of all such notices be directed to another Person at another address.

7. NO IMPACT ON CONTRACTUAL OBLIGATIONS

Except as expressly set forth herein or in an applicable Relevant Contract, nothing in this Communications Protocol nor any Relevant Party's actions or inactions hereunder shall have any impact on any Relevant Party's rights or obligations under the Relevant Contracts.

8. ATTACHMENTS

Attachment 1 - Key Personnel

Attachment 2 - Remarketing Notice Form

Attachment 3 - Designation of Alternate Electricity Delivery Points Form

Attachment 4 - Designation of Scheduling Entities Form

Attachment 1

Key Personnel

J. Aron Marketing Personnel:

Kenan Arkan
Sales and Trading
Telephone: (212) 357-2542
gs-prepay-notices@gs.com

J. Aron Scheduling Personnel:

Scheduling Team
Email: ficc-jaron-natgasops@ny.email.gs.com
Direct Phone: (212) 902-8148
Fax: 212.493.9847

Carly Norlander
ICE Chat: cnorlander1
Email: ficc-jaron-natgasops@ny.email.gs.com
Direct Phone: (403) 233-9299
Fax: (212) 493-9847

Other J. Aron Personnel:

Lindsey McInally
Telephone: (212) 855-0880
ficc-struct-sett@gs.com

Andres E. Aguila
Telephone: (212) 855-6008
Fax: (212) 291-2124
andres.aguila@gs.com

Buyer Personnel:

Northern California Energy Authority
c/o Sacramento Municipal Utility District
Attention: Power Contracts Administration
6301 S Street
Sacramento, CA 95817-1899
Phone: (916) 732-6244
Email: PowerContractsAdmin@smud.org

Power Related:
916-732-5669
DayAheadTrading@smud.org

Invoicing/Payments:
916-732-6751
EnergySettlements@smud.org

Attachment 2

Remarketing Notice Form

Date: [_____]

To: J. Aron Scheduling

From: [Project Participant Scheduling]

This notice is being delivered pursuant to that certain Amended & Restated Prepaid Commodity Sales Agreement (the “Prepaid Agreement”) dated [_____], 2024 by and between Aron Energy Prepay 33 LLC (“Seller”) and Northern California Energy Authority (“Buyer”) and relates to the Amended & Restated Commodity Supply Contract (the “Commodity Supply Contract”) dated [_____], 2024 by and between Buyer and [_____] (“Project Participant”). Capitalized terms not defined herein are defined in the Prepaid Agreement.

Check the box to indicate type of Remarketing Notice (The numbers of the Primary (“P”) and Alternate (“A”) Delivery Points below correspond to those same Primary and Alternate Electricity Delivery Points set forth in Exhibit A of the Agreement, or as may be designated by the Parties from time to time):

Monthly Remarketing Notice:

Month(s) for which remarketing is requested: _____, 20__ through _____, 20__.

Pursuant to Section 3(b) of Exhibit C, Buyer requests that Seller remarket in such Month(s) the following Contract Quantities of Electricity most recently nominated for delivery at the following respective Delivery Point:

Delivery Point (P/A, #)	MWh/Delivery Hour for each Delivery Hour in the Month

Daily Remarketing Notice:

Delivery Hours for which remarketing is requested: _____, 20__ through _____, 20__.

Pursuant to Section 3(c) of Exhibit C, Buyer requests that Seller remarket for such Delivery Hours the following Contract Quantities of Electricity most recently nominated for delivery at the following respective Delivery Point:

Delivery Point (P/A, #)	MWh/Delivery Hour

Submitted by Buyer:
Northern California Energy Authority

By: _____
Name:
Title:

Attachment 3

Designation of Alternate Electricity Delivery Points Form

This designation is delivered pursuant to that certain Amended & Restated Prepaid Commodity Sales Agreement (the “Prepaid Agreement”) dated [_____], 2024 by and between Aron Energy Prepay 33 LLC (“Seller”) and Northern California Energy Authority (“Buyer”) and the Amended & Restated Commodity Supply Contract (the “Commodity Supply Contract”) dated [_____], 2024 by and between Buyer and [_____] (“Project Participant”). Capitalized terms not defined herein are defined in the Prepaid Agreement and the Commodity Supply Contract. [Project Participant]/[Buyer] hereby proposes the following Alternate Electricity Delivery Points for deliveries of Electricity that would otherwise be made at the specified Primary Electricity Delivery Point:

Alternate Electricity Delivery Point	Primary Electricity Delivery Point Affected	Daily Commodity Reference Price Pricing Point	Additional Restrictions
1			[e.g.
2			Vol. Limit: _____
3			Time Limit: _____
(etc.)			

Unless otherwise agreed between Seller, Buyer and the Project Participant, an Alternate Electricity Delivery Point shall utilize the same Daily Commodity Reference Price and Monthly Index Price as the Primary Electricity Delivery Point it replaces or otherwise affects. Buyer is not required to agree and accept this designation if the Project Participant has been designated as the Receipt Scheduling Entity for the affected Primary Electricity Delivery Point by Buyer pursuant to Exhibit G-1 of the Prepaid Agreement but shall be deemed to have accepted such designation if it accepted by Seller. A Project Participant is not required to agree or accept this designation (or any change to the Daily Commodity Reference Price and Monthly Index Price) if it is being submitted by Buyer pursuant to the Prepaid Agreement only.

AGREED AND ACCEPTED BY SELLER:	(if required) AGREED TO AND ACCEPTED BY PROJECT PARTICIPANT:	(if required) AGREED TO AND ACCEPTED BY BUYER:
By: Name: Title:	By: Name: Title:	By: Name: Title:

Attachment 4

Designation of Scheduling Entities Form

This designation is being delivered pursuant to that certain Amended & Restated Prepaid Commodity Sales Agreement (the “Prepaid Agreement”) dated [_____], 2024 by and between Aron Energy Prepay 33 LLC (“Seller”) and Northern California Energy Authority (“Buyer”) and relates to the Amended & Restated Commodity Supply Contract (the “Commodity Supply Contract”) dated [_____], 2024 by and between Buyer and [_____] (“Project Participant”). Capitalized terms not defined herein are defined in the Prepaid Agreement.

[If delivered by Buyer:

Receipt Scheduling Entity:

Delivery Point: _____

Effective Date(s) of Service of Receipt Scheduling Entity (full Months only):
_____, _____ to _____, _____, if applicable

Notice Information for Receipt Scheduling Entity:

Name: _____
Attention: _____
Address: _____

Telephone: _____
Fax: _____]

[If delivered by Seller:

Delivery Scheduling Entity:

Delivery Point: _____

Effective Date(s) of Service of Delivery Scheduling Entity (full Months only):
_____, _____ to _____, _____, if applicable

Notice Information for Delivery Scheduling Entity:

Name: _____
Attention: _____
Address: _____

Telephone: _____

Fax: _____
Submitted by: _____

[Buyer or Seller]

By: _____
Name: _____
Title: _____

EXHIBIT H

ASSIGNMENT OF ASSIGNABLE CONTRACTS

1. General Requirements.

- 1.1. During the Electricity Delivery Period, Assigned Rights and Obligations under a Assignable Contract may only be assigned under this Exhibit H if the following requirements are satisfied:
 - 1.1.1. The seller under such Assignable Contract (the “APC Party”) either (i) has a long-term senior unsecured credit rating that is “Baa3” or higher from Moody’s Investor’s Service, Inc. (or any successor to its credit rating service operation), “BBB-” or higher from Standard & Poor’s Ratings Services (or any successor to its credit rating service operation) or “A” or higher from Fitch Ratings, Inc. (or any successor to its credit rating service operation), (ii) provides alternative credit support that is reasonably satisfactory to J. Aron or (iii) otherwise provides evidence of its creditworthiness that is reasonably satisfactory to J. Aron;
 - 1.1.2. The APC Party can satisfy J. Aron’s internal requirements as they relate to “know your customer” rules, policies and procedures, anti-money laundering rules and regulations, Dodd-Frank Act, Commodity Exchange Act, Patriot Act and similar rules, regulations, requirements and corresponding policies;
 - 1.1.3. The APC Party is organized in the United States and in a jurisdiction that does not present material and adverse tax consequences to J. Aron or Issuer in connection with such proposed assignment, provided that, for the avoidance of doubt, Issuer shall have an obligation to reimburse J. Aron for any adverse tax consequences that are not material;
 - 1.1.4. The Applicable Project (as defined below) is reasonably expected to be able to generate the P99 Generation (as defined below), as agreed by Purchaser and J. Aron; *provided* that, if Purchaser and J. Aron are unable to reach agreement after good faith discussions, then J. Aron shall make such determination in its sole discretion.
 - 1.1.5. J. Aron, Purchaser, and Issuer have agreed on and executed an Assignment Schedule for such assignment;
 - 1.1.6. J. Aron, Purchaser, Issuer, and the applicable APC Party have agreed on and executed an Assignment Agreement for such assignment;
 - 1.1.7. Any such Assignable Contract must terminate on or before the end of the Electricity Delivery Period; and

1.1.8. The contract price (in \$/MWh) payable by Purchaser under the applicable Assignable Contract (the “APC Contract Price”) is a fixed price unless Issuer, Purchaser and J. Aron agree, each in their sole discretion, to appropriate changes to the relevant documents to accommodate a floating APC Contract Price. For purposes of this Exhibit H, a “fixed price” shall be deemed to include any price that is fixed but for a periodic escalation (whether pre-determined or by reference to a price index).

2. **Proposed Assignment.** Purchaser may propose an assignment under Article XV of the Commodity Supply Contract by delivering the following items to Issuer and to J. Aron:

- 2.1. A written notice of the proposed assignment signed by Purchaser;
- 2.2. A true and complete copy of the Assignable Contract under which such Assigned Rights and Obligations would arise;
- 2.3. Evidence reasonably satisfactory to Issuer and J. Aron that all authorizations, consents, approvals, licenses, rulings, permits, exemptions, variances, orders, judgments, decrees, declarations of or regulations by any Government Agency necessary in connection with the transactions contemplated by the Assignable Contract and the assignment of the Assignable Contract to J. Aron have been obtained and are in full force and effect;
- 2.4. For any Assignable Contract to be assigned during the Electricity Delivery Period, a description and information regarding the applicable project to which the Assignable Contract applies (the “Applicable Project”), including but not limited to information on the location, interconnection(s), and operating history of Applicable Project;
- 2.5. For any Assignable Contract to be assigned during the Electricity Delivery Period, Purchaser shall deliver monthly historical generation and meteorological data of the Applicable Project dating back to the commercial operation date and, if readily available, a report from a nationally recognized consultant in the energy industry that is reasonably acceptable to Issuer and J. Aron showing the “P99” forecasted generation (“P99 Generation”); and
- 2.6. Such additional information as Issuer and J. Aron may reasonably request regarding the Assignable Contract and the APC Party.

Following Issuer’s and J. Aron’s receipt of such information, Purchaser and Issuer will, and Issuer will cause J. Aron to, (i) negotiate in good faith with one another regarding a potential Assignment Schedule, with the initial draft of such Assignment Schedule to be developed by J. Aron, and (ii) negotiate in good faith with one another and the APC Party regarding an Assignment Agreement, in each case related to the proposed assignment. If such Assignment Schedule and Assignment Agreement are agreed to by the representative parties thereto, the applicable parties will execute such Assignment Agreement and Assignment Schedule to be effective upon the assignment of the Assigned Rights and Obligations from Purchaser to J. Aron pursuant to the Assignment Agreement. For the avoidance of doubt, Purchaser acknowledges that J. Aron will not be required

to execute any Assignment Agreement, Assignment Schedule, or otherwise accept any Assigned Rights and Obligations unless the APC Party (i) satisfies J. Aron's internal requirements as they relate to "know your customer" rules, policies and procedures, anti-money laundering rules and regulations, Dodd-Frank Act, Commodity Exchange Act, Patriot Act and similar rules, regulations, requirements and corresponding policies, (ii) is organized in the United States, and (iii) satisfies all other requirements in Section 1 of this Exhibit H.

3. **Assignment Schedule.** In connection with each assignment, an "Assignment Schedule" will be prepared in the form attached hereto as Attachment 1 (with such changes as agreed by the Parties in their sole discretion), must be executed by Purchaser, Issuer and J. Aron, and must include each of the following:

- 3.1. The term of such Assigned Rights and Obligations (the "Assignment Period") shall have the meaning specified in each applicable Assignment Agreement and shall (i) end not later than one (1) Month prior to the end of the current Reset Period, (ii) not commence any earlier than sixty (60) days after Purchaser's original notice under Section 2.1 above, and (iii) have a primary term that does not exceed 12 Months in duration (*provided*, for the avoidance of doubt, the primary term references the term of the Assignment Period and not the term of a Assignable Contract). To the extent mutually agreed upon by all parties to the Assignment Schedule, the Assignment Period may include a month-to-month or annual renewal term that may be terminated upon written notice of termination 30 days prior to the end of any renewal term.
- 3.2. For any Assignable Contract to be assigned during the Electricity Delivery Period, a description of the Applicable Project or upstream supplier.
- 3.3. For any Assignable Contract to be assigned during the Electricity Delivery Period, the P99 Generation and P50 Generation of the Applicable Project and, if the Assigned Quantities that Purchaser wishes to include in the Assigned Rights and Obligations is less than the total P99 forecasted generation available from the Applicable Project, the Assigned Quantities as so limited. Purchaser and J. Aron shall in good faith attempt to agree upon the P99 Generation based on the information provided pursuant to Section 2.5 above; *provided* that, if Purchaser and J. Aron are unable to reach agreement, then J. Aron shall make such determination in its sole discretion.
- 3.4. The "Assigned Prepay Quantity" for each Month of the Assignment Period, which Assigned Prepay Quantity will be the lesser of (i) the P99 Generation of the Applicable Project for such Month, and (ii) the Assigned Quantities as described in Section 3.3 for such Month; *provided* that, in the case of clause (b), the Assigned Prepay Quantity for each Month may not exceed the limit expressed in the proviso to Section 3.5 below.
- 3.5. An updated Exhibit A to the Commodity Supply Contract reflecting a reduction in Hourly Quantity during the Assignment Period after giving effect to the Assignment Schedule (the "Reduced Hourly Quantity"), which Reduced Hourly

Quantity for each Delivery Hour will equal (i) the Assigned Prepay Quantity for such Delivery Hour (which will be determined by dividing the Assigned Prepay Quantity for the applicable Month by the number of Delivery Hours in such Month), *multiplied by* (ii) the result of (A) the APC Contract Price applicable for such Month, divided by (B) \$[____]/MWh⁶ while deliveries are to the Primary Electricity Delivery Point; *provided* that, in each case, if the Reduced Hourly Quantity for any Month would result in a Contract Quantity of less than zero (0), then the Assigned Prepay Quantity for such Month will be reduced to the closest whole MWh, such that the Contract Quantity is not reduced below zero (0).

- 3.6. The APC Contract Price, which as set forth in Section 1.7 above must be a fixed price unless Issuer, Purchaser and J. Aron agree to appropriate changes to the relevant documents to accommodate a floating APC Contract Price.
- 3.7. The Assigned Delivery Point for all Assigned Electricity.
- 3.8. The APC Contract Price must be inclusive of all Assigned Products. Assigned Products may not include (i) capacity or (ii) any other products that are separately delivered from Electricity (during the Electricity Delivery Period) other than RECs whose delivery may be accomplished through the delivery of a certificate or reporting to an applicable tracking agency.

⁶ NTD: This amount will be the result of the following formula as determined at pricing: Front End Fixed Price + (Active Swap Fee – Standby Swap Fee).

Attachment 1

FORM OF ASSIGNMENT SCHEDULE

Assigned Product: [_____]

Assigned Delivery Point: [_____]

Assigned Prepay Quantity: As set forth in Appendix 2; provided that (i) all Assigned Products shall be delivered pursuant to the Limited Assignment Agreement during the Assignment Period as provided in Appendix 1 and (ii) the Assigned Prepay Quantity is defined for the convenience of PPA Buyer and J. Aron and shall have no impact on the obligations of the Parties under the Limited Assignment Agreement.

APC Contract Price: \$[_____] /MWh

Assignment Period: [_____]

Attachment 2

FORM OF ASSIGNMENT AGREEMENT

NOTE: To be attached to the Commodity Supply Contract and may be included as an exhibit to any new Commodity Supply Contract or PPA executed by the municipal utility offtaker along with this language to be added to the Commodity Supply Contract or PPA: “[Seller] agrees that [Buyer] may assign a portion of its rights and obligations under this Agreement to J. Aron and Company, LLC (“J. Aron”) at any time upon not less than [] days’ notice by delivering a written request for such assignment, which request must include a proposed assignment agreement in the form attached hereto as [Exhibit], with the blanks in such form completed in [Buyer’s] sole discretion. *Provided* that [Buyer] delivers a proposed assignment agreement complying with the previous sentence, [Seller] agrees to (i) comply with J. Aron’s reasonable requests for know-your-customer and similar account opening information and documentation with respect to [Seller], including but not limited to information related to forecasted generation, credit rating, and compliance with anti-money laundering rules, the Dodd-Frank Act, the Commodity Exchange Act, the PATRIOT Act and similar rules, regulations, requirements and corresponding policies; and (ii) promptly execute such assignment agreement and implement such assignment as contemplated thereby, subject only to the countersignature of J. Aron and Company, LLC and [Buyer].”

This Limited Assignment Agreement (this “**Assignment Agreement**” or “**Agreement**”) is entered into as of [], by and among [], a [] (“**PPA Seller**”), [Municipal Participant], a [] (“**PPA Buyer**”), and J. Aron & Company LLC, a New York limited liability company (“**J. Aron**”), and relates to that certain power purchase agreement between PPA Buyer and PPA Seller as further described in Appendix 1 (the “**PPA**”). Unless the context otherwise specifies or requires, capitalized terms used but not defined in this Agreement have the meanings set forth in the PPA.

In consideration of the premises above and the mutual covenants and agreements herein set forth, PPA Seller, PPA Buyer and J. Aron (the “**Parties**” hereto; each is a “**Party**”) agree as follows:

1. **Limited Assignment and Delegation.**

- (a) PPA Buyer hereby assigns, transfers and conveys to J. Aron all right, title and interest in and to the rights of PPA Buyer under the PPA to receive delivery of the products described on Appendix 1 (the “**Assigned Products**”) during the Assignment Period (as defined in Appendix 1), as such rights may be limited or further described in the “Further Information” section on Appendix 1 (the “**Assigned Product Rights**”). All Assigned Products shall be delivered pursuant to the terms and conditions of this Agreement during the Assignment Period as provided in Appendix 1. All other rights of PPA Buyer under the PPA are expressly reserved for PPA Buyer.
- (b) PPA Buyer hereby delegates to J. Aron the obligation to pay for all Assigned Products that are actually delivered to J. Aron pursuant to the Assigned Product Rights during the Assignment Period (the “**Delivered Product Payment Obligation**” and together with the Assigned Product Rights, collectively the “**Assigned Rights and Obligations**”); provided that (i) all other obligations of PPA Buyer under the PPA are expressly retained by PPA Buyer and PPA Buyer shall be solely responsible for any amounts due to PPA Seller that are not directly related to Assigned Products; and (ii) the Parties acknowledge and agree that PPA Seller will only be obligated to deliver a single consolidated invoice during the Assignment Period (with a copy to J. Aron

consistent with Section 1(d) hereof). To the extent J. Aron fails to pay for any Assigned Products by the due date for payment set forth in the PPA, PPA Buyer agrees that it will remain responsible for such payment within five (5) Business Days (as defined in the PPA) of receiving notice of such non-payment from PPA Seller.

- (c) J. Aron hereby accepts and PPA Seller hereby consents and agrees to the assignment, transfer, conveyance and delegation described in clauses (a) and (b) above.
- (d) All scheduling of Assigned Products and other communications related to the PPA shall take place pursuant to the terms of the PPA; provided that (i) title to Assigned Product will pass from PPA Seller to J. Aron upon delivery by PPA Seller of Assigned Product in accordance with the PPA; (ii) PPA Buyer will provide copies to J. Aron of any Notice of a Force Majeure Event or Event of Default or default, breach or other occurrence that, if not cured within the applicable grace period, could result in an Event of Default contemporaneously upon delivery thereof to PPA Seller and promptly after receipt thereof from PPA Seller; (iii) PPA Buyer will provide copies to J. Aron of any forecasts of Energy generation provided by PPA Seller under the PPA; (iv) PPA Seller will provide copies to J. Aron of all invoices and supporting data provided to PPA Buyer pursuant to Section [], provided that any payment adjustments or subsequent reconciliations occurring after the date that is 10 days prior to the payment due date for a monthly invoice, including pursuant to Section [], will be resolved solely between PPA Buyer and PPA Seller and therefore PPA Seller will not be obligated to deliver copies of any communications relating thereto to J. Aron; and (v) PPA Buyer and PPA Seller, as applicable, will provide copies to J. Aron of any other information reasonably requested by J. Aron relating to Assigned Products.
- (e) PPA Seller acknowledges that (i) J. Aron intends to immediately transfer title to any Assigned Products received from PPA Seller through one or more intermediaries such that all Assigned Products will be re-delivered to PPA Buyer; and (ii) in the event that PPA Buyer fails to pay the relevant intermediary entity for any such Assigned Products, the receivables owed by PPA Buyer for such Assigned Products (“PPA Buyer Receivables”) may be transferred to J. Aron. To the extent any such PPA Buyer Receivables are transferred to J. Aron, J. Aron may transfer such PPA Buyer Receivables to PPA Seller and apply the face amount thereof as a reduction to any Delivered Product Payment Obligation. To effect such transfer, J. Aron shall deliver to PPA Seller a notice of intent to transfer PPA Buyer Receivables not later than the payment due date for the Delivered Product Payment Obligation and shall deliver to PPA Seller a bill of sale signed by J. Aron not later than five Business Days thereafter. Thereafter, PPA Seller shall be entitled to pursue collection on such PPA Buyer Receivables directly against PPA Buyer.
- (f) The Assigned Prepay Quantity set forth in Appendix 2 relates to obligations by and between J. Aron and PPA Buyer and has no impact on PPA Seller’s rights and obligations under the PPA.

2. Assignment Early Termination.

- (a) The Assignment Period may be terminated early upon the occurrence of any of the following:
 - (1) delivery of a written notice of termination specifying a termination date by either J. Aron or PPA Buyer to each of the other Parties;

- (2) delivery of a written notice of termination specifying a termination date by PPA Seller to each of J. Aron and PPA Buyer following J. Aron's failure to pay when due any amounts owed to PPA Seller in respect of any Delivered Product Payment Obligation and such payment is not made by J. Aron within five (5) business days following receipt by J. Aron and PPA Buyer of written notice;
 - (3) delivery of a written notice by PPA Seller if any of the events described in the definition of [Bankrupt] in the PPA occurs with respect to J. Aron; or
 - (4) delivery of a written notice by J. Aron if any of the events described in in the definition of [Bankrupt] [John: Some of the PPAs I just reviewed called this Bankruptcy Event, bracketing for future.] in the PPA occurs with respect to PPA Seller.
- (b) The Assignment Period will end at the end of last delivery hour on the date specified in the termination notice provided pursuant to Section 2(a), which date shall not be earlier than the end of the last day of the calendar month in which such notice is delivered if termination is pursuant to clause 2(a)(1) or 2(a)(2) above. All Assigned Rights and Obligations shall revert from J. Aron to PPA Buyer upon the early termination of the Assignment Period, provided that (i) J. Aron shall remain responsible for the Delivered Product Payment Obligation with respect to any Assigned Product delivered to J. Aron prior to the end of the Assignment Period, and (ii) any legal restrictions on the effectiveness of such reversion (whether arising under bankruptcy law or otherwise) shall not affect the expiration or early termination of the Assignment Period
- (c) The Assignment Period will automatically terminate upon the expiration or early termination of the PPA. All Assigned Rights and Obligations shall revert from J. Aron to PPA Buyer upon the expiration of or early termination of the PPA, provided that (i) J. Aron shall remain responsible for the Delivered Product Payment Obligation with respect to any Assigned Product delivered to J. Aron prior to the end of the Assignment Period, and (ii) any legal restrictions on the effectiveness of such reversion (whether arising under bankruptcy law or otherwise) shall not affect the expiration or early termination of the Assignment Period.

3. Representations and Warranties. The PPA Seller and the PPA Buyer represent and warrant to J. Aron that (a) the PPA is in full force and effect; (b) no event or circumstance exists (or would exist with the passage of time or the giving of notice) that would give either of them the right to terminate the PPA or suspend performance thereunder; and (c) all of its obligations under the PPA required to be performed on or before the Assignment Period Start Date have been fulfilled.

4. Notices. Any notice, demand, or request required or authorized by this Assignment Agreement to be given by one Party to another Party shall be delivered in accordance with [Article]/[Section] [] of the PPA and to the addresses of each of PPA Seller and PPA Buyer specified in the PPA. PPA Buyer agrees to notify J. Aron of any updates to such notice information, including any updates provided by PPA Seller to PPA Buyer. Notices to J. Aron shall be provided to the following address, as such address may be updated by J. Aron from time to time by notice to the other Parties:

J. Aron & Company LLC
200 West Street
New York, New York 10282-2198
Email: gs-prepay-notices@gs.com

5. Miscellaneous. Section [] (Buyer’s Representations and Warranties), Article [] (Confidential Information), Section [] (No Consequential Damages), Section [] (Severability), Section [] (Counterparts), Section [] (Amendments), Section [] (No Agency, Partnership, Joint Venture or Lease), Section [] (Mobile-Sierra), Section [] (Electronic Delivery), Section [] (Limitations on Damages) Section [] (Binding Effect) and Section [] (No Recourse to Members of Buyer) of the PPA are incorporated by reference into this Agreement, *mutatis mutandis*, as if fully set forth herein.

6. U.S. Resolution Stay Provisions. The Parties hereby confirm that they are adherents to the ISDA 2018 U.S. Resolution Stay Protocol (“ISDA U.S. Stay Protocol”), the terms of the ISDA U.S. Stay Protocol are incorporated into and form a part of this Agreement, and for the purposes of such incorporation, (i) J. Aron shall be deemed to be a Regulated Entity, (ii) each of PPA Buyer and PPA Seller shall be deemed to be an Adhering Party, and (iii) this Agreement shall be deemed a Protocol Covered Agreement. In the event of any inconsistencies between this Agreement and the ISDA U.S. Stay Protocol, the ISDA U.S. Stay Protocol will prevail.

7. Governing Law, Jurisdiction, Waiver of Jury Trial.

- (a) **Governing Law.** This Assignment Agreement and the rights and duties of the parties under this Assignment Agreement will be governed by and construed, enforced and performed in accordance with the laws of the State of New York, without reference to any conflicts of laws provisions that would direct the application of another jurisdiction’s laws.
- (b) **Jurisdiction.** Each party submits to the exclusive jurisdiction of (i) the courts of the State of New York located in the Borough of Manhattan and (ii) the federal courts of the United States of America for the Southern District of New York.
- (c) **Waiver of Right to Trial by Jury.** Each party waives, to the fullest extent permitted by applicable law, any right it may have to a trial by jury in respect of any suit, action or proceeding relating to this assignment agreement.

[Remainder of Page Intentionally Blank]

IN WITNESS WHEREOF, the Parties have executed this Assignment Agreement effective as of the date first set forth above.

[PPA SELLER]

By: _____

Name: _____

Title: _____

[MUNICIPAL PARTICIPANT]

By: _____

Name: _____

Title: _____

J. ARON & COMPANY LLC

By: _____

Name:

Title:

Execution and delivery of the foregoing Assignment Agreement is hereby approved.

NORTHERN CALIFORNIA ENERGY AUTHORITY

By: _____

Name:

Title:

Appendix 1

Assigned Rights and Obligations

PPA: “PPA” means that certain [Power Purchase and Sale Agreement] dated [____], 20[___] by and between [____] and [____], as amended from time to time.

“**Assignment Period**” means the period beginning on [_____] and extending until [_____] , provided that in no event shall the Assignment Period extend past the earlier of (i) the termination of the Assignment Period pursuant to Section 2 of the Assignment Agreement and (ii) the end of the Delivery Term under the PPA; provided that applicable provisions of this Agreement shall continue in effect after termination of the Assignment Period to the extent necessary to enforce or complete, duties, obligations or responsibilities of the Parties arising prior to the termination.

Assigned Product: “Assigned Products” include [____].

Further Information: [____]

Appendix 2

Assigned Prepay Quantity

[NOTE: To be set forth in a monthly volume schedule.]

**DRAFT AMENDED AND RESTATED
RE-PRICING AGREEMENT**

AMENDED & RESTATED RE-PRICING AGREEMENT

This Amended & Restated Re-Pricing Agreement (this “Agreement”) is made and entered into as of [____], 2024, by and between Aron Energy Prepay 33 LLC, a Delaware limited liability company (“Prepay LLC”), and Northern California Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Article 1, Chapter 5, Division 7, Title 1, Section 6500 et seq. of the California Government Code, as amended) (the “Issuer”). Each of Prepay LLC and the Issuer is individually referred to as a “Party”, and collectively as the “Parties”.

RECITALS:

WHEREAS, J. Aron & Company LLC (“J. Aron”) and the Issuer previously entered into that certain Re-Pricing Agreement dated as of December 19, 2018 (the “Original Agreement”), and J. Aron has novated all of its right, title and interest under the Original Agreement to Prepay LLC; and

WHEREAS, the Parties desire to amend and restate the Original Agreement in its entirety.

NOW, THEREFORE, in consideration of the premises above and the mutual covenants and agreements herein set forth, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

Section 1. Definitions. For all purposes of this Agreement, except as otherwise expressly provided herein or unless the context otherwise requires, capitalized terms used herein shall have the meanings set forth below, which shall be equally applicable to both the singular and plural forms of such terms.

“Additional Reduction Amount” has the meaning set forth in Exhibit A.

“Annual Refund” has the meaning set forth in the Commodity Supply Contracts.

“Available Discount Percentage” means, for each Reset Period, the final amount determined by the Calculation Agent as of the applicable Bond Pricing Date pursuant to Exhibit A, expressed as a percentage, which may not be less for any portion of the Reset Period than the lower of (i) the last Estimated Available Discount Percentage provided or updated by the Calculation Agent pursuant to Section 5(a) for such portion of the Reset Period, and (ii) the highest Minimum Discount Percentage applicable to such portion of the Reset Period. The Available Discount Percentage may vary during different periods of time during a Reset Period.

“Bond Closing Date” means the date on which the Bonds are issued pursuant to the Bond Indenture.

“Bond Indenture” means the Amended & Restated Trust Indenture, dated as of the first day of the month of the Bond Closing Date, between the Issuer and the Trustee, as the same may be amended or supplemented from time to time pursuant to one or more Supplemental Bond

Indentures, or any Trust Indenture governing bonds issued as refunding bonds for Bonds issued under such Trust Indenture.

“Bond Pricing Date” means, for any Reset Period, the date of execution of the applicable bond remarketing agreement or bond purchase agreement.

“Bonds” means the [Series 2024 Bonds] issued pursuant to the Bond Indenture.

“Business Day” has the meaning set forth in the Bond Indenture.

“Calculation Agent” means Prepay LLC.

“Commodity” has the meaning set forth in the Prepaid Agreement.

“Commodity Supply” means respect to the Prepaid Agreement, the aggregate Monthly Contract Quantities of Commodities to be delivered by Prepay LLC under the Prepaid Agreement.

“Commodity Supply Contract” means, individually or collectively, any or all of the separate Commodity Supply Contracts, each dated as of the first day of the month of the Bond Closing Date, between the Issuer and a Project Participant, as each may be amended from time to time.

“Commodity Unit” has the meaning set forth in the Prepaid Agreement.

“Contract Quantity” has the meaning set forth in the Prepaid Agreement.

“Current Reset Period” means the period from [____], 2024 to [____], 20[____].

“Delivery Period” has the meaning set forth in the Prepaid Agreement.

“Delivery Period Implied Rate” has the meaning set forth in Exhibit A.

“Estimated Available Discount Percentage” has the meaning set forth in Section 5(a).

“Excess Amount” is the positive difference, if any, of the Prior Remaining Commodity Value less the New Remaining Delivery Cost.

“Fixed Rate” has the meaning set forth in Exhibit A.

“Funding Agreement” has the meaning set forth in the Prepaid Agreement.

“Funding Recipient” has the meaning set forth in the Prepaid Agreement.

“Interest Rate Period” has the meaning set forth in the Bond Indenture.

“Issuer” has the meaning set forth in the preamble.

“LLC Agreement” means the Amended and Restated Limited Liability Company Agreement of Prepay LLC, dated as of [____], 2024.

“Minimum Discount Percentage” has the meaning set forth in the Commodity Supply Contracts.

“Monthly Contract Quantity” means, for any month, the aggregate quantity of Commodities to be delivered by Prepay LLC to the Issuer under the Prepaid Agreement for such month.

“Monthly Discount Percentage” has the meaning set forth in Section 6(b).

“New Remaining Delivery Cost” has the meaning set forth in Exhibit A.

“New Reset Period” has the meaning set forth in Exhibit A.

“Old Reset Period” has the meaning set forth in Exhibit A.

“Outstanding” has the meaning set forth in the Bond Indenture.

“Participant Notification Deadline Day” means, with respect to each Reset Period, the last day on which the Issuer is permitted to provide a notice of the Estimated Available Discount Percentage to Project Participants under the Commodity Supply Contracts.

“Prepaid Agreement” means the Amended & Restated Prepaid Commodity Sales Agreement, dated as of [____], 2024, between Prepay LLC and the Issuer, as the same may be amended or supplemented in accordance with its terms.

“Prepay LLC” has the meaning set forth in the preamble.

“Prior Remaining Commodity Value” has the meaning set forth in Exhibit A.

“Project Participant” has the meaning set forth in the Bond Indenture.

“Qualified Firm Offer” means, for any Reset Period after the Current Reset Period, a binding offer from a Qualified Funding Recipient on the Bond Pricing Date for such Reset Period to provide a Funding Agreement that reflects (i) a Reset Period Implied Rate that is sufficient to achieve the Minimum Discount Percentage (as defined in the Commodity Supply Contract) for such Reset Period, and (ii) a Reset Period length that complies with the requirements of Section 3.

“Qualified Funding Recipient” has the meaning set forth in the LLC Agreement.

“Qualified Potential Offer” means, for any Reset Period after the Current Reset Period, indicative pricing from a Qualified Funding Recipient that would constitute a Qualified Firm Offer if made on the Bond Pricing Date for such Reset Period.

“Re-pricing Date” means, for any Reset Period, any Business Day not earlier than 90 days prior to the earlier of (i) the date on which the Bonds then Outstanding may be called for

optional redemption in accordance with the Bond Indenture, and (ii) the day following the last day of the Reset Period then in effect.

“Re-pricing Period” means, for any Reset Period, the period of time prior to such Reset Period during which a Re-pricing Date could occur for such Reset Period.

“Remaining Commodity Value” has the meaning set forth in Exhibit A.

“Remaining Delivery Cost” has the meaning set forth in Exhibit A.

“Reset Period” means each period determined pursuant to Section 3.

“Reset Period Implied Rate” has the meaning set forth in Exhibit A.

“Series” means Bonds designated as a Series and authorized to be issued by the Issuer pursuant to Section 2.01 of the Bond Indenture.

“Supplemental Bond Indenture” means any Bond Indenture supplemental to or amendatory of the Bond Indenture executed and delivered by the Issuer and the Trustee in accordance with Article X of the Bond Indenture.

“Termination Payment Adjustment Schedule” has the meaning set forth in the Prepaid Agreement.

“Trustee” means the trustee under the Bond Indenture and its successors and assigns.

Section 2. Purpose of Agreement and Intention of Parties. The Parties are entering into this Agreement in connection with the execution and delivery of the Bond Indenture, the Prepaid Agreement and the other transaction documents for the purpose of establishing the methodology for determining the Available Discount Percentage for each Reset Period following the Current Reset Period.

Section 3. Reset Periods. Each Reset Period shall commence on the next day that follows the last day of the Current Reset Period or, subsequently, the immediately prior Reset Period. The length of each Reset Period shall be the remaining term of the Delivery Period unless the Calculation Agent elects, in its sole discretion, a shorter period, which period may not be shorter than the lesser of (a) three years or (b) the remaining term of the Delivery Period without the Issuer’s consent; provided further that:

- (i) The Current Reset Period and each subsequent Reset Period (other than the final Reset Period) shall end the last day of the month preceding the end of the Interest Rate Period. For example, if the Interest Rate Period ends October 31, the last day of the Reset Period would end September 30, and
- (ii) the final Reset Period shall end on the last day of the Delivery Period.

Section 4. Reserved.

Section 5. Estimated Available Discount Percentage.

(a) On any Business Day not earlier than the 70th day prior to the earliest potential Re-pricing Date for any Reset Period and not later than 10 Business Days prior to the latest potential Re-pricing Date for any Reset Period, the Issuer may request that the Calculation Agent provide an estimate of the length of such Reset Period, Reset Period Implied Rate and Available Discount Percentage (the “Estimated Available Discount Percentage”) that are anticipated to apply to such Reset Period. In determining the Estimated Available Discount Percentage, the Calculation Agent shall utilize the methodology set forth in Exhibit A. The Calculation Agent may provide initial or updated estimates on its own initiative or upon a subsequent request from the Issuer.

(b) The Issuer shall notify each of the Project Participants of the Estimated Available Discount Percentage and any updates thereto under the relevant provisions of the Commodity Supply Contracts. Unless the Calculation Agent and the Issuer otherwise agree, in any notice of Estimated Available Discount Percentage provided to a Project Participant prior to the Participant Notification Deadline Day, the Issuer shall clearly indicate in such notice that the notice is provisional and not intended to trigger a Project Participant’s right to provide a CSC Remarketing Election (as defined in the Prepaid Agreement).

(c) If, at any time during the Re-pricing Period for a Reset Period, a Qualified Funding Recipient provides a Qualified Firm Offer for such Reset Period, Issuer agrees that it will execute a bond purchase or remarketing agreement reflecting a Funding Agreement for such Reset Period between Prepay LLC and the Qualified Funding Recipient selected by Prepay LLC for such Reset Period.

(d) Issuer agrees to cooperate in good faith with Prepay LLC and to take all steps reasonably within Issuer’s control that are necessary, in each case, to cause a Bond Pricing Date to occur for any Qualified Potential Offer that Prepay LLC elects to pursue, which steps shall include retaining an underwriter or remarketing agent for the Bonds to be priced and participating in the Bond marketing or remarketing process.

Section 6. Determination of Available Discount Percentage and Monthly Discount Percentage.

(a) The Calculation Agent shall determine on the Bond Pricing Date the Available Discount Percentage for such Reset Period in accordance with the methodology set forth in Exhibit A.

(b) For each Reset Period after the Current Reset Period, the Calculation Agent shall determine the monthly Discount Percentage portion of the Available Discount Percentage for such Reset Period (the “Monthly Discount Percentage”). The Issuer and the Calculation Agent then shall mutually agree upon the projected Annual Refund for such Reset Period, which shall be determined consistent with the Commodity Supply Contracts and shall be the remaining portion of the Available Discount Percentage.

Section 7. Termination Payment Adjustment Schedule; Monthly Quantity Changes.

(a) For any Reset Period, the Calculation Agent may modify the Termination Payment Adjustment Schedule to reflect changes to in the Remaining Commodity Values set forth on Attachment 1 to Exhibit A and otherwise, provided that such modifications are sufficient to meet the redemption requirements of the Bonds to be sold for such Reset Period.

(b) The Issuer and the Calculation Agent agree that the Prepaid Agreement will be amended to reflect any reductions to Monthly Contract Quantities determined pursuant to Exhibit A.

Section 8. Timing. The dates and time intervals stated in this Agreement may be waived or altered by the mutual agreement of the Parties.

Section 9. Termination. This Agreement shall terminate automatically upon termination of the Prepaid Agreement for any reason. For the avoidance of doubt, nothing in this Agreement or any other agreement restricts the ability of Funding Recipient to repay or prepay the Funding Agreement as set forth in the Funding Agreement, which election to repay or prepay may be made by Funding Recipient in its sole and absolute discretion in accordance with the terms of the Funding Agreement. Any such termination shall not be considered a failure by the Calculation Agent to act in good faith hereunder, regardless of whether the Parties have previously discussed pricing that may apply to any Reset Period or otherwise taken the steps required under this Agreement.

Section 10. Communications. All notices, requests and other communications shall be in writing (including facsimile, electronic mail or other electronic means) provided to the addresses and pursuant to the notice requirements of the Prepaid Agreement.

Section 11. Miscellaneous.

(a) Incorporation by Reference. Article X [Jurisdiction; Waiver of Jury Trial] and Sections 19.3 [Entirety; Amendments], 19.4 [Governing Law], 19.5 [Non-Waiver], 19.6 [Severability], 19.7 [Exhibits], 19.9 [Relationship of Parties], 19.13 [Counterparts] of the Prepaid Agreement are incorporated by reference into this Agreement, *mutatis mutandis*, as if fully set forth herein.

(b) Amendments to Commodity Supply Contracts and Bond Indenture. The Issuer shall not agree to or consent to any modification, supplement, amendment or waiver of any provision of the Commodity Supply Contracts or Bond Indenture that affects the meaning of any defined term herein or the operation of any provision hereof.

[Signature Pages Follow]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed and delivered by their respective duly authorized officers as of the date first written above.

ARON ENERGY PREPAY 33 LLC
By: J. Aron & Company LLC, its Manager

By: _____
Name: _____
Title: _____

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By: _____
Name: _____
Title: _____

Exhibit A

The Calculation Agent will undertake the following steps in determining the Available Discount Percentage for any Reset Period (each, a “New Reset Period”):

- Step 1: Determine the “Prior Remaining Commodity Value”
 - The Calculation Agent will determine the Remaining Commodity Value for the last month of the current Reset Period (the “Old Reset Period”) based on Attachment 1 hereto, as such Attachment 1 initially existed or was last updated at the beginning of the prior Reset Period (the “Prior Remaining Commodity Value”).
 - “Remaining Commodity Value” means, for any month, the amount set forth on Attachment 1 of the Exhibit A as the “Remaining Commodity Value” for such month, as Attachment 1 may be updated pursuant to this Exhibit A in connection with the establishment of any new Reset Period.
- Step 2: The Calculation Agent will specify the length of the New Reset Period pursuant to Section 3 of the Agreement
- Step 3: The Calculation Agent will specify a Reset Period Implied Rate for the New Reset Period and a Delivery Period Implied Rate
 - “Reset Period Implied Rate” means, for any Reset Period other than the Current Reset Period, a fixed rate offered by the Funding Recipient for such Reset Period as of the Bond Pricing Date for such Reset Period, which rate the Parties acknowledge (i) will be determined by Funding Recipient in its sole and absolute discretion based on the rate of Funding Recipient, and (ii) for which the Funding Recipient may consider all relevant factors, including (w) the nature of the source of funding provided by the Funding Agreement, including any applicable regulatory or capital charges, (x) the tenor, (y) market interest for such funding at the time, and (z) any other unique attributes of the Funding Agreement funding relative to other sources available to Funding Recipient. The Parties acknowledge that, for purposes of providing an Estimated Available Discount Percentage, the Calculation Agent may rely on indicative pricing proposals from a Qualified Funding Recipient.
 - “Delivery Period Implied Rate” means, for any remaining portion of the Delivery Period that is not covered by a Reset Period, a fixed rate determined by the Calculation Agent in its sole and absolute discretion as of the Bond Pricing Date for such Reset Period which the Calculation Agent determines (in its sole discretion) that Funding Recipient would be able to acquire, as of the date of determination, funding from other sources comparable to the funding provided by the Funding Agreement as of the date of determination if such Funding Agreement were extended for the entire Delivery Period. In determining such a rate, and the Calculation Agent may consider all relevant factors, including (w) the nature of the source of funding provided by the

Funding Agreement, including any applicable regulatory or capital charges, (x) the length of the Delivery Period, (y) market interest for such funding at the time, and (z) any other unique attributes of the Funding Agreement funding relative to other sources available to Funding Recipient.

- Step 4: Determine the “New Remaining Delivery Cost”
 - The Calculation Agent will determine the “Remaining Delivery Cost” for each month of the Delivery Period after the Old Reset Period. The Remaining Delivery Cost for the first month of the New Reset Period is the “New Remaining Delivery Cost”.
 - “Remaining Delivery Cost” means, for any determination month, an amount calculated by the Calculation Agent equal to the net present value of a stream of monthly payments equal to the Monthly Contract Quantities multiplied by the applicable Fixed Price (as defined in the Prepaid Agreement) for the remainder of the Delivery Period (including such determination month), Discount Percentageed at the Reset Period Implied Rate for the New Reset Period and the Delivery Period Implied Rate for the remainder of the Delivery Period after the New Reset Period.

- Step 5: Additional Reduction Amount or Changing Monthly Contract Quantities
 - If the Prior Remaining Commodity Value is less than the New Remaining Delivery Cost:
 - If the Reset Period will go to the end of the Delivery Period, the Calculation Agent will reduce the Monthly Contract Quantities to zero in as many months as necessary at the end of the Delivery Period (and, to the extent necessary, reduce the Monthly Contract Quantities in the last remaining month of the Reset Period to a quantity greater than zero) such that the Prior Remaining Commodity Value is equal to the New Remaining Delivery Cost.
 - If the Reset Period will end prior to the Delivery Period, the Calculation Agent may reduce the Monthly Contract Quantities as provided above to the extent such reduction results in a greater Available Discount Percentage for such Reset Period.
 - If the Prior Remaining Commodity Value is greater than the New Remaining Delivery Cost:
 - Subject to the following bullet, the Calculation Agent will pay to the Issuer the amount, if any, by which (A) the Prior Remaining Commodity Value exceeds (B) the New Remaining Delivery Cost (the “Additional Reduction Amount”) on the first day of the contemplated Interest Rate Period, which payment shall be applied by the Issuer to the retirement of Bonds.
 - Notwithstanding the prior bullet, the Calculation Agent shall elect to retain a portion of the Excess Amount to the extent (i) the Reset Period will end prior to the Delivery Period, (ii) such retention results in a greater Available Discount Percentage, and (iii) doing so is

- consistent with the amortization requirement of the Bonds. If the Calculation Agent elects to retain a portion of such Excess Amount pursuant to the foregoing proviso, the Additional Reduction Amount shall be the portion of such Excess Amount that the Calculation Agent elects to pay.
- Any Additional Reduction Amount or changes in Monthly Contract Quantities will then be included in calculating the New Remaining Delivery Cost. An Additional Reduction Amount will reduce the Prior Remaining Commodity Value for this purpose.
 - The Calculation Agent will amend Attachment 1 hereto effective as of the beginning of the New Reset Period such that the Remaining Commodity Value for each month in the New Reset Period and the remainder of the Delivery Period is equal to the Remaining Delivery Cost for such month as determined under Step 4 and updated under this Step 5.
- Step 6: Determine the Fixed Rate for the Bonds for the term of such contemplated Interest Rate Period
 - The remarketing agent or underwriter of the Bonds for such contemplated Interest Rate Period will specify the Fixed Rate.
 - “Fixed Rate” means, for any New Reset Period, the fixed rate or rates of interest payable by the Issuer with respect to a Series of Bonds or, in the case of a Series of Variable Rate Bonds (as defined in the Bond Indenture), the fixed rate payable by the Issuer under the related fixed rate swap transaction, which Fixed Rates will be determined on the Bond Pricing Date at a rate sufficient to enable all the Bonds to be sold or remarketed on such Bond Pricing Date in accordance with the Bond Indenture (which sale price may include a premium or Discount Percentage to par), as determined based on market information then available.
 - Step 7: Determine Monthly Discount Percentage Portion of Available Discount Percentage
 - The Calculation Agent will determine the Monthly Discount Percentage portion of the Available Discount Percentage for each portion of the Reset Period based on the expected differences between monthly revenues and monthly debt service and other obligations of the Commodity Project (as defined in the Bond Indenture).
 - Step 8: Determine Annual Refund Portion of Available Discount Percentage
 - The Calculation Agent and Issuer shall mutually agree upon the projected Annual Refund (as defined in the Commodity Supply Contracts) for the Reset Period, which shall be determined consistent with the Commodity Supply Contracts and shall be the remaining portion of the Available Discount Percentage.

Attachment 1 to Exhibit A
Remaining Commodity Values
(To be attached.)

DRAFT NOVATION AGREEMENT

DRAFT

NOVATION AGREEMENT

dated as of [____], 2024 (this “Novation Agreement”) among:

Northern California Energy Authority (the “Remaining Party”),

J. Aron & Company LLC (the “Transferor”),

Aron Energy Prepay 33 LLC (the “Transferee”)

AND

[Computershare], f/k/a Wells Fargo Bank, National Association (the “Trustee”).

WHEREAS, the Transferor and the Remaining Party entered into that certain Prepaid Commodity Sales Agreement dated as of December 10, 2018 (the “Prepaid Agreement”).

WHEREAS, in connection with the execution of the Prepaid Agreement, the Transferor and RBC Europe Limited (the “Swap Counterparty”) entered into that certain ISDA Master Agreement, dated as of December 10, 2018, together with the Schedule and 2016 Credit Support Annex for Variation Margin (VM) dated as of December 10, 2018, and the Confirmation thereto, dated as of December 10, 2018, evidencing natural gas price hedging transactions thereunder (the “Back-End Swap Agreement”).

WHEREAS, in further connection with the execution of the Prepaid Agreement, the Transferor and the Swap Counterparty entered into that certain Custodial Agreement with [Computershare], in its capacity as custodian and the Trustee, dated as of December 19, 2018 (the “Back-End Custodial Agreement”).

WHEREAS, in further connection with the execution of the Prepaid Agreement, the Transferor and the Remaining Party entered into that certain Re-Pricing Agreement dated as of December 19, 2018 (the “Re-Pricing Agreement”).

WHEREAS, in further connection with the execution of the Prepaid Agreement, the Transferor, the Remaining Party and the Trustee entered into that certain Receivables Purchase Agreement dated as of December 19, 2018 (the “Receivables Purchase Agreement”).

WHEREAS, in further connection with the execution of the Prepaid Agreement, the Transferor, the Remaining Party and the Trustee entered into that certain Investment Agreement dated as of December 19, 2018 (the “J. Aron Investment Agreement”).

WHEREAS, the Transferor wishes to transfer by novation to the Transferee, and the Transferee wishes to accept the transfer by novation of all the rights, liabilities, duties, and obligations of the Transferor under and in respect of the Prepaid Agreement, the Re-Pricing Agreement, and the Receivables Purchase Agreement with the effect that the Remaining Party and the Transferee enter into such new agreements, respectively, and specifically, a “New Prepaid Agreement,” “New Re-Pricing Agreement,” and “New Receivables Purchase Exhibit” (collectively, the “New Agreements”), each as amended and restated consistent with the terms hereof and further described herein.

WHEREAS, contemporaneously with the execution of this Novation Agreement, the Swap Counterparty, the Transferor, and the Transferee will enter into a Novation Agreement with respect to the Back-End Swap Agreement.

WHEREAS, the Transferor wishes to have released and discharged, as a result and to the extent of the transfers described above, its respective obligations under and in respect of the Prepaid Agreement, the Re-Pricing Agreement, and the Receivables Purchase Agreement (collectively, the “Old Agreements”).

WHEREAS, the Remaining Party wishes to accept the Transferee as its sole counterparty with respect to the New Prepaid Agreement and the New Re-Pricing Agreement. Accordingly, the parties agree as follows:

1. Definitions.

Terms defined in the Prepaid Agreement are used herein as so defined, unless otherwise provided herein.

2. Transfer, Release, Discharge and Undertakings.

In consideration of the mutual representations, warranties and covenants contained in this Novation Agreement and other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged by each of the parties) and contingent upon the issuance of the Bonds (as defined below), the parties hereby agree as follows:

- (a) The Remaining Party and the Transferor are each released and discharged from further obligations to each other with respect to the Prepaid Agreement, the Receivables Purchase Agreement and the Re-Pricing Agreement (collectively, the “Original Agreements”) and their respective rights against each other thereunder are cancelled effective as of [____], 2024 (the “Novation Effective Date”), provided that, notwithstanding anything to the contrary herein, such release and discharge shall not affect any rights, liabilities or obligations of the Remaining Party or the Transferor under the Original Agreements with respect to payments or other obligations arising prior to the Novation Effective Date, and all such payments and obligations (including amounts due for the Month preceding the Month in which the Novation Effective Date occurs, which amounts shall be payable in the Month in which Novation Effective Date occurs) shall be paid or performed by the Remaining Party or the Transferor in accordance with the terms of the Original Agreements;
- (b) in respect of the New Prepaid Agreement, the New Receivables Purchase Exhibit and the New Re-Pricing Agreement, the Remaining Party and the Transferee each undertake liabilities and obligations towards the other and acquire rights against each other under the New Agreements (as further described in Paragraph 3 below); and
- (c) in consideration of the Transferee’s assumption of the Transferor’s obligations under the Original Agreements and contingent upon the issuance of the Bonds (as defined below), the Transferor agrees to make a payment of \$[____] to the account of the Transferee specified immediately below on the Novation Effective Date.

THE BANK OF NEW YORK MELLON
ABA# 021000018
ACCOUNT NUMBER: [____]
ACCOUNT NAME: AEP[____] REVENUE ACCOUNT

3. Amendment and Restatement of the New Prepaid Agreement, the New Receivables Purchase Exhibit and the New Re-Pricing Agreement.

The Transferee and the Remaining Party agree that the New Prepaid Agreement, New Receivables Purchase Exhibit and the New Re-Pricing Agreement shall be amended and restated effective as of the Novation Effective Date in the forms attached hereto as Exhibit A for the New Prepaid Agreement, Exhibit B for the New Receivables Purchase Exhibit and Exhibit C for the New Re-Pricing Agreement, and, for the avoidance of doubt, the parties acknowledge and agree that the New Receivables Purchase Exhibit will be set forth in the New Prepaid Agreement as an exhibit thereto. Additionally, the parties acknowledge and agree that such amendments and restatements (a) shall bind the Transferee and the Remaining Party effective as of the Novation Effective Date but (b) shall not affect any rights, liabilities or obligations of the Remaining Party or the Transferor under the Original Agreements with respect to payments or other obligations arising prior to the Novation Effective Date, including amounts due for the Month preceding the Month in which the Novation Effective Date occurs (which amounts shall be payable in the Month of the Novation Effective Date consistent with the terms of the Original Agreements). Additionally, the Trustee consents to the amendment of the Receivables Purchase Agreement as described herein, and the parties acknowledge and agree that (x) the Trustee shall not be a party to the New Receivables Purchase Exhibit and (y) the Trustee shall have no further obligations under the Receivables Purchase Agreement following its satisfaction of any obligations arising prior to the Novation Effective Date.

4. Termination of Goldman Sachs Guaranty.

In connection with the novation of the Prepaid Agreement, the Remaining Party acknowledges and agrees as follows:

- (a) contingent upon the issuance of the Bonds, GSG shall deliver a notice terminating the GSG Guaranty effective as of the Novation Effective Date;
- (b) notwithstanding anything to the contrary therein, such notice of termination shall not give rise to a termination right under the Prepaid Agreement or New Prepaid Agreement or otherwise affect any rights, liabilities or obligations of (i) the Remaining Party or the Transferor under the Prepaid Agreement or (ii) the Remaining Party or the Transferee under the New Prepaid Agreement; and
- (c) contingent upon the issuance of the Bonds and subject to the Transferor’s satisfaction of the Transferor’s obligations arising prior to the Novation Effective Date under the Original Agreements, GSG is released, discharged and shall have no further obligations under the GSG Guaranty.

5. Termination of J. Aron Investment Agreement.

In connection with and contingent upon the issuance of the Bonds, the Remaining Party directs the Transferor to remit all of the remaining Debt Service Funds and Reserve Funds (as defined in the J. Aron Investment Agreement) in the amounts and to the accounts listed below on [____], 2024, and the Remaining Party, the Transferor and the Trustee acknowledge and agree that the J. Aron Investment Agreement shall terminate and be of no further force and effect upon the Transferor’s payment of such amounts to the accounts specified below in accordance with this Paragraph 5.

- (a) \$[____] to the following account:

[____]
[____]
[____]
[____]

- (b) \$[____] to the following account:

[____]
[____]
[____]
[____]

6. Termination of Collateral Agency Agreement.

In connection with and contingent upon the issuance of the Bonds, [Computershare], the Trustee and the Remaining Party hereby agree that certain Collateral Agency Agreement, dated as of December 19, 2018 (the “Collateral Agency Agreement”), by and between the Trustee and the Remaining Party, shall terminate and be of no further force and effect as of the Novation Effective Date.

7. Novation and Amendments Contingent on Issuance of Bonds.

Notwithstanding anything contained in this Novation Agreement or in the amended & restated agreements listed in Paragraph 3 to the contrary, the parties acknowledge that the novations and amendments described herein shall be contingent upon the issuance by the Remaining Party of its [Commodity Supply Revenue Bonds, Series 2024] (the “Bonds”) prior to the Novation Effective Date. In the event that the Bonds are not issued prior to the Novation Effective Date, then (a) this Novation Agreement and the amended & restated agreements listed in Paragraph 3 shall automatically terminate and shall be of no further force or effect, (b) the parties shall have no further rights or obligations hereunder or thereunder (c) the Old Agreements shall remain in full force and effect subject to the terms thereof. The Remaining Party represents and warrants that

it intends and expects to issue the Bonds and agrees to use its best efforts to issue the Bonds prior to the Novation Effective Date.

8. Representations and Warranties.

- (a) On the date of this Novation Agreement, Transferor represents and warrants that no Seller Default, or, to its knowledge, Optional Non-Default Termination Event or Automatic Non-Default Termination Event, as those terms are defined in the Prepaid Agreement, with respect to it under the Prepaid Agreement has occurred and is continuing.
- (b) Transferor represents and warrants that it will contemporaneously on the date of this Novation Agreement assign the Back-End Swap Agreement to Transferee.
- (c) Transferor represents and warrants to Transferee that:
 - (i) it has made no prior transfer (whether by way of security or otherwise) of any interest or obligation in or under the Prepaid Agreement, the Receivables Purchase Agreement or the Re-Pricing Agreement; and
 - (ii) as of the date hereof, all obligations of the Transferor under the Prepaid Agreement, the Receivables Purchase Agreement, and the Re-Pricing Agreement required to be performed on or before the date hereof have been fulfilled.
- (d) Each party represents to the other that:
 - (i) **Status.** It is duly organized and validly existing under the laws of the jurisdiction of its organization or incorporation and, if relevant under such laws, in good standing;
 - (ii) **Powers.** It has the power to execute this Novation Agreement and any other documentation relating to this Novation Agreement to which it is a party, to deliver this Novation Agreement and any other documentation relating to this Novation Agreement that it is required by this Novation Agreement to deliver and to perform its obligations under this Novation Agreement and has taken all necessary action to authorize such execution, delivery and performance;
 - (iii) **No Violation or Conflict.** Such execution, delivery and performance do not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any contractual restriction binding on or affecting it or any of its assets;
 - (iv) **Consents.** All governmental and other consents that are required to have been obtained by it with respect to this Novation Agreement have been obtained and are in full force and effect and all conditions of any such consents have been complied with;
 - (v) **Obligations Binding.** Its obligations under this Novation Agreement constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law));
 - (vi) **Non-Reliance.** It is acting for its own account, and it has made its own independent decisions to enter into this Novation Agreement and as to whether this Novation Agreement is appropriate or proper for it based upon its own judgment and upon advice from such advisers as it has deemed necessary. It is not relying on any communication (written or oral) of the other parties as investment advice or as a recommendation to enter into this Novation Agreement; it being understood that information and explanations related to the terms and conditions of this Novation Agreement shall not be considered investment advice or a recommendation to enter into this Novation Agreement. No communication (oral or written) received from any of the other parties shall be deemed to be an assurance or guarantee as to the expected results of this Novation Agreement;

- (vii) **Assessment and Understanding.** It can assess the merits of and understanding (on its own behalf or through independent professional advice), and understands and accepts, the terms conditions and risks of this Novation Agreement. It is also capable of assuming, and assumes, the risks of this Novation Agreement; and
- (viii) **Status of Parties.** None of the other parties is acting as a fiduciary for or an adviser to it in respect of this Novation Agreement.
- (e) The Transferor makes no representation or warranty and does not assume any responsibility with respect to the legality, validity, effectiveness, adequacy or enforceability of the New Prepaid Agreement, the New Receivables Purchase Exhibit or the New Re-Pricing Agreement or any documents relating thereto and assumes no responsibility for the condition, financial or otherwise, of the Remaining Party, the Transferee, or any other person or for the performance and observance by the Remaining Party, the Transferee, or any other person of any of its obligations under the New Prepaid Agreement, the New Receivables Purchase Exhibit, the New Re-Pricing Agreement, or any document relating thereto and any and all such conditions and warranties, whether express or implied by law or otherwise, are hereby excluded.
- (f) The Remaining Party hereby directs the Trustee to enter into this Novation Agreement and any further agreements that are necessary or desirable in connection herewith, including but not limited to a novation agreement relating to the Seller Swap, an escrow agreement relating to the defeasance of the Series 2018 Bonds (as defined in the Bond Indenture) and a notice of defeasance for the Series 2018 Bonds.

9. Counterparts.

This Novation Agreement (and each amendment, modification and waiver in respect of it) may be executed and delivered in counterparts (including by facsimile transmission), each of which will be deemed an original.

10. Costs and Expenses.

The parties will each pay their own costs and expenses (including legal fees) incurred in connection with this Novation Agreement and because of the negotiation, preparation and execution of this Novation Agreement.

11. Amendments.

No amendment, modification or waiver in respect of this Novation Agreement will be effective unless in writing (including a writing evidenced by a facsimile or electronic transmission) and executed by each of the parties or confirmed by an exchange of telexes or electronic messages on an electronic messaging system.

12. (a) Governing Law.

This Novation Agreement and the rights and duties of the parties under this Novation Agreement shall be governed by and construed, enforced and performed in accordance with the laws of the State of New York, without regard to any conflicts of law principle that would direct the application of another jurisdiction's law; provided, however, that the authority of the Remaining Party to enter into and perform its obligations under this Novation Agreement shall be determined in accordance with the laws of the State of California.

(b) Jurisdiction.

All judicial proceedings brought against either party arising out of or relating hereto shall be brought exclusively in (i) the courts of the State of New York located in the Borough of Manhattan, (ii) the federal courts of the United States of America for the Southern District of New York or (iii) the federal courts of the United States of America in any other State. By executing and delivering this Novation Agreement, each party, for itself and in connection with its properties, irrevocably accepts generally and unconditionally the exclusive jurisdiction and venue of such courts; waives any defense of *forum non conveniens*; agrees that service of all process in any such proceeding in any such court may be made by registered or certified mail, return receipt requested, to the party at its address provided in accordance

with Article XVI of the New Prepaid Agreement; agrees that service as provided above is sufficient to confer personal jurisdiction over the party in any such proceeding in any such court, and otherwise constitutes effective and binding service in every respect.

(c) Waiver of Right to Trial by Jury.

Each party waives, to the fullest extent permitted by applicable law, any right it may have to a trial by jury in respect of any suit, action, or proceeding relating to this Novation Agreement.

Each party (i) certifies that no representative, agent, or attorney of either other party has represented, expressly or otherwise, that such party would not, in the event of such a suit, action, or proceeding, seek to enforce the foregoing waiver and (ii) acknowledges that it and each of the other parties have been induced to enter into this Novation Agreement by, among other things, the mutual waivers and certifications in this Paragraph.

IN WITNESS WHEREOF the parties have executed this Novation Agreement on the respective dates specified below.

[Signature Page Follows]

.....
Northern California Energy Authority

.....
J. Aron & Company LLC

By:
Name:
Title:
Date:

By:
Name:
Title:
Date:

.....
Aron Energy Prepay 33 LLC
By: J. Aron & Company LLC, its Manager

.....
[Computershare]

By:
Name:
Title:
Date:

By:
Name:
Title:
Date:

.....

.....

EXHIBIT A

New Prepaid Agreement

[To be attached.]



EXHIBIT B

New Receivables Purchase Exhibit

[To be attached.]

EXHIBIT C

New Re-Pricing Agreement

[To be attached.]



DRAFT SPE MASTER CUSTODIAL AGREEMENT

SPE MASTER CUSTODIAL AGREEMENT

This SPE Master Custodial Agreement (this “Custodial Agreement”) is made and entered into as of [____], 2024, by and among Aron Energy Prepay 33 LLC, a Delaware limited liability company (“Prepay LLC”), J. Aron & Company LLC, a New York limited liability company (“J. Aron”), Northern California Energy Authority, a joint powers authority and a public entity of the State of California established pursuant to the provisions of the Joint Exercise of Powers Act (Article 1, Chapter 5, Division 7, Title 1, Section 6500 et seq. of the California Government Code, as amended) (“Issuer”), and The Bank of New York Mellon, a New York banking corporation, in its capacity as custodian hereunder (in such capacity, the “SPE Custodian”).

RECITALS:

WHEREAS, Issuer is issuing its [Commodity Supply Revenue Bonds, Series 2024] (the “Bonds”) pursuant to the Amended & Restated Trust Indenture, dated as of [____], 2024 (the “Bond Indenture”) between Issuer and [Computershare], in its capacity as trustee under the Bond Indenture (the “Trustee”); and

WHEREAS, Prepay LLC and Issuer are entering into an Amended & Restated Prepaid Commodity Sales Agreement, dated as of [____], 2024 (the “Prepaid Agreement”); and

WHEREAS, in connection with the execution of the Prepaid Agreement, Prepay LLC and J. Aron are entering into a Commodity Purchase, Sale and Service Agreement, dated as of the date hereof (the “Commodity Sale and Service Agreement”); and

WHEREAS, in connection with the execution of the Prepaid Agreement, Prepay LLC and Pacific Life Insurance Company, a stock life insurance company organized under the laws of the State of Nebraska (along with its successors and permitted assignees, “Funding Recipient”), are entering into a Non-Participating Funding Agreement, dated as of the date hereof (as may be amended, supplements, modified or otherwise replaced, the “Funding Agreement”) pursuant to which Funding Recipient is the borrower and Prepay LLC is the lender; and

WHEREAS, Royal Bank of Canada, a bank organized under the Laws of Canada (“Swap Counterparty”), and Prepay LLC are entering into a commodity price swap transaction pursuant to an ISDA Master Agreement, dated as of December 10, 2018, together with the Amended & Restated Schedule, dated as of [____], 2024, Credit Support Annex, dated as of [____], 2024, Amended & Restated Paragraph 13 to Credit Support Annex, dated as of [____], 2024, and Amended & Restated Confirmation, dated as of [____], 2024 (the “Back-End Commodity Swap”) and payment of amounts due by Prepay LLC to Swap Counterparty under the Back-End Commodity Swap will be administered pursuant to a custodial account (the “Swap Payments Account”) established under that certain Custodial Agreement, dated as of December 19, 2018, by and among Prepay LLC, the Trustee and Swap Counterparty; and

WHEREAS, to enable Prepay LLC to perform certain of its obligations in connection with the Commodity Project, Prepay LLC and J. Aron are entering into Subordinated Term Loan Agreements, dated as of [____], 2024 (the “J. Aron Subordinated Loans”), pursuant to which J. Aron is the lender and Prepay LLC is the borrower; and

WHEREAS, Prepay LLC, J. Aron, Issuer and the SPE Custodian propose to enter into this Custodial Agreement in order to administer payments to be (a) received by Prepay LLC under (i) the Funding Agreement, (ii) the Commodity Sale and Service Agreement, (iii) the Prepaid Agreement, (iv) the Back-End Commodity Swap consistent with the terms of the Seller Swap Custodial Agreement (as defined in the Prepaid Agreement) and (v) the J. Aron Subordinated Loans and (b) paid by Prepay LLC under (i) the Prepaid Agreement, (ii) the Commodity Sale and Service Agreement, (iii) the Back-End Commodity Swap consistent with the terms of the Seller Swap Custodial Agreement and (iv) the J. Aron Subordinated Loans.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

Section 1. Defined Terms. Any capitalized term used herein and not otherwise defined herein (including in the recitals) shall have the meaning assigned to such term in the Bond Indenture. Except where expressly provided otherwise, any reference herein to any agreement or document includes all amendments, supplements or restatements to and of such agreement or document as may occur from time to time in accordance with its terms and the terms hereof, and any reference to a party to any such agreement includes all successors and assigns of such party thereunder permitted by the terms hereof and thereof.

Section 2. Appointment of SPE Custodian. Prepay LLC, J. Aron and Issuer hereby appoint The Bank of New York Mellon as SPE Custodian under this Custodial Agreement, with such rights and obligations as are specifically set forth herein. The SPE Custodian hereby accepts such appointment under the terms and conditions set forth herein.

Section 3. Payment Instructions to Custodian; Exposure Calculations. No later than the 9th day of each Month, Prepay LLC shall deliver written payment instructions to the SPE Custodian detailing the amounts owed to and to be paid by Prepay LLC under the Back-End Commodity Swap, the Prepaid Agreement, the Commodity Sale and Service Agreement, the J. Aron Subordinated Loans and the Funding Agreement for such Month and the SPE Custodian shall make any payments owed by Prepay LLC by wire transfer to the applicable accounts specified in Exhibit A hereto; provided that, if Prepay LLC fails to deliver such instructions, the SPE Custodian may request and rely upon instructions from Issuer. The parties hereto acknowledge and agree that such instructions may be provided by J. Aron as Prepay LLC's agent in the form of a consolidated statement, setting forth (i) the Buyer's Statement (as defined in the Prepaid Agreement) delivered by Issuer under the Prepaid Agreement, (ii) the Buyer's Statement (as defined in the Commodity Sale and Service Agreement), (iii) the Billing Statement (as defined in the Prepaid Agreement) delivered by Prepay LLC under the Prepaid Agreement, (iv) the Billing Statement (as defined in the Commodity Sale and Service Agreement) delivered by J. Aron under the Commodity Sale and Service Agreement, (v) Prepay LLC's settlement calculations under the Back-End Commodity Swap (vi) Prepay LLC's principal and interest payment obligations, if any, under the J. Aron Subordinated Loans, (vii) any distributions to be made to J. Aron in its capacity as the sole member of Prepay and (viii) the Funding Recipient's scheduled payment obligations under the Funding Agreement; provided that, for the avoidance of doubt, the SPE Custodian shall be entitled to rely on the payment information set forth on Exhibit B and Issuer shall still have the obligation to deliver its Buyer's Statement under the

Prepaid Agreement and J. Aron as Prepay LLC's agent then will reflect such amounts in a consolidated statement delivered hereunder.

(b) Prepay LLC has appointed the SPE Custodian as the Valuation Agent under and as defined in the Credit Support Annex to the Back-End Commodity Swap. The SPE Custodian hereby accepts such appointment under the terms and conditions set forth herein, and Prepay LLC agrees that it shall on a daily basis provide exposure calculations to the SPE Custodian to enable it to perform the calculations as Valuation Agent under and as defined in the Back-End Commodity Swap and subject to the terms set forth on Schedule I, which is attached hereto and made a part hereof.

Section 4. Prepay LLC Revenue Account.

(a) With respect to payments required to be made to Prepay LLC under the Funding Agreement, the Commodity Sale and Service Agreement, the Prepaid Agreement and the Back-End Commodity Swap, there is hereby established with the SPE Custodian at its offices located at 500 Ross Street, AIM 154-1275, Pittsburgh, PA 15262, a payments account designated as the "AEP33 REVENUE ACCOUNT", bearing SPE Custodian's Account No. [_____] (the "Prepay LLC Revenue Account"); and (A) any and all payments payable by Funding Recipient to Prepay LLC pursuant to the Funding Agreement, (B) any and all payments payable by J. Aron to Prepay LLC pursuant to the Commodity Sale and Service Agreement, (C) any and all net payments payable by Issuer to Prepay LLC pursuant to the Prepaid Agreement; and (D) any and all net payments payable by the Swap Counterparty to Prepay LLC pursuant to the Back-End Commodity Swap shall be paid by wire transfer to and deposited in the Prepay LLC Revenue Account.

THE BANK OF NEW YORK MELLON
ABA# 021000018
ACCOUNT NUMBER: [_____]
ACCOUNT NAME: AEP33 REVENUE ACCOUNT

(b) Amounts deposited in the Prepay LLC Revenue Account shall be held in trust for the benefit of Prepay LLC until applied as set forth in Section 4(c) and Section 4(d) below. The SPE Custodian shall not be required to comply with any orders, demands, or other instructions from Issuer (or the Trustee on behalf of Issuer), J. Aron or the Counterparties with respect to the Prepay LLC Revenue Account, including, without limitation, items presented for payment, or any order or instruction directing the disposition of funds or other assets held in or credited to the Prepay LLC Revenue Account, and each of the parties hereto agree that prior to the termination of this Custodial Agreement in accordance with the terms hereof, they shall have no right to direct the disposition of funds or other assets held in or credited to the Prepay LLC Revenue Account, or to withdraw or otherwise obtain funds or other assets held in or credited to the Prepay LLC Revenue Account, whether by order or instruction to the SPE Custodian or otherwise, except to the extent that amounts on deposit in the Prepay LLC Revenue Account are payable (i) to the Swap Payments Accounts in accordance with the terms hereof, the Back-End Custodial Agreements and the Back-End Commodity Swap, (ii) to Issuer in accordance with the terms hereof and of the Prepaid Agreement and (iii) to J. Aron in accordance with the terms hereof and of the Commodity Sale and Service Agreement.

(c) Subject to Section 4(d) below, the SPE Custodian shall withdraw amounts on deposit in the Prepay LLC Revenue Account on behalf of Prepay LLC and apply such amounts as follows:

(i) First: To the extent amounts are then available in the Prepay LLC Revenue Account, to each of the Swap Payments Accounts on the 24th of each Month, but if such day is not a Business Day (as defined in the Back-End Commodity Swap), the immediately preceding Business Day, in satisfaction of any net amounts owed by Prepay LLC to the Swap Counterparty under the Back-End Commodity Swap as set forth in the instructions delivered under Section 3(a).

(ii) Second: To the extent of any remaining funds then available in the Prepay LLC Revenue Account, to Issuer on the 24th of each Month, in satisfaction of any amounts owed by Prepay LLC to Issuer under the Prepaid Agreement as set forth in the instructions delivered under Section 3(a).

(iii) Third: To the extent of any remaining funds then available in the Prepay LLC Revenue Account, to J. Aron on or after the 26th of each Month, in satisfaction of any amounts owed by Prepay LLC to J. Aron under the Commodity Sale and Service Agreement as set forth in the instructions delivered under Section 3(a).

(iv) Fourth: To the extent of any remaining funds then available in the Prepay LLC Revenue Account following the application of funds pursuant to the foregoing clauses (i) - (iii) in any Month, to the Prepay LLC Capital Account.

(d) Notwithstanding the foregoing, the parties acknowledge and agree as follows:

(i) the Prepayment (as defined in the Prepaid Agreement) shall be paid by Issuer to Prepay LLC pursuant to the Prepaid Agreement on the Initial Issue Date and such amount shall be (A) paid by wire transfer to the Prepay LLC Revenue Account and (B) transferred promptly by the SPE Custodian to Funding Recipient on behalf of Prepay LLC pursuant to Prepay LLC's written instructions (which may include standing instructions) in accordance with the Funding Agreement;

(ii) any payment by Funding Recipient to Prepay LLC pursuant to [Section 4.3 (Termination for Breach by Pacific Life)] of the Funding Agreement shall be (A) paid by wire transfer to the Prepay LLC Revenue Account and (B) as directed by Prepay LLC in writing the SPE Custodian shall either:

(1) transfer such amount promptly to an account specified by the Trustee for payment of Prepay LLC's Termination Payment obligation under the Prepaid Agreement; or

(2) transfer such amount promptly to a separate account established by the SPE Custodian at such time, with such amount only to be applied upon receipt of and consistent with subsequent written instructions from Prepay LLC (I) indicating the date on which Prepay LLC owes a Termination Payment under the Prepaid Agreement and (II) providing the account specified by the Trustee for

payment of Prepay LLC's Termination Payment obligation under the Prepaid Agreement;

(iii) any payment by J. Aron to Prepay LLC of the Termination Payment (as defined in the Prepaid Agreement) pursuant to Section 17.6(a) of the Commodity Sale and Service Agreement shall be (A) paid by wire transfer to Prepay LLC Revenue Account and (B) transferred promptly by the SPE Custodian to an account specified by the Trustee for payment of Prepay LLC's Termination Payment obligation under the Prepaid Agreement;

(iv) any payment by J. Aron to Prepay LLC with respect to a Ledger Event pursuant to Section 17.6(b) of the Commodity Sale and Service Agreement shall be (A) paid by wire transfer to the Prepay LLC Revenue Account and (B) transferred promptly by the SPE Custodian pursuant to Prepay LLC's written instructions (which may include standing instructions) to an account specified by the Trustee in satisfaction of Prepay LLC's corresponding obligation to the Issuer under Section 17.2 of the Prepaid Agreement; and

(v) any payment by J. Aron to Prepay LLC with respect to Call Receivables (as defined in the Commodity Sale and Service Agreement) pursuant to Exhibit C to the Commodity Sale and Service Agreement shall be (A) paid by wire transfer to the Prepay LLC Revenue Account and (B) transferred promptly by the SPE Custodian pursuant to Prepay LLC's written instructions (which may include standing instructions) to an account specified by the Trustee in satisfaction of Prepay LLC's corresponding obligation to Issuer under Exhibit E to the Prepaid Agreement.

Section 5. Prepay LLC Capital Account.

(a) Other than amounts required to be deposited in the Prepay LLC Put Receivables Account pursuant to Section 6 below, with respect to (i) any capital contributions to Prepay LLC pursuant to its Amended and Restated Limited Liability Company Agreement, dated as of the date hereof, (ii) any loan by J. Aron to Prepay LLC pursuant to the J. Aron Subordinated Loans, and (iii) certain other amounts that may be paid to Prepay LLC, there is hereby established with the SPE Custodian at its office located at 500 Ross Street, AIM 154-1275, Pittsburgh, PA 15262, a deposit account designated as the "AEP33 CAPITAL ACCOUNT", bearing SPE Custodian's Account No. [_____] (the "Prepay LLC Capital Account").

THE BANK OF NEW YORK MELLON
ABA# 021000018
ACCOUNT NUMBER: [_____]
ACCOUNT NAME: AEP33 CAPITAL ACCOUNT

(b) Amounts deposited in the Prepay LLC Capital Account shall be held in trust for the benefit of Prepay LLC until (i) applied as set forth in Section 5(c) or Section 5(d) below or (ii) withdrawn by Prepay LLC as set forth in Section 5(e) below at Prepay LLC's written request; provided, however, that the SPE Custodian shall have a lien, security interest and right of set-off of the SPE Custodian against the Prepay LLC Capital Account. The SPE Custodian shall not be

required to comply with any orders, demands, or other instructions from any Person other than Prepay LLC (or J. Aron as Prepay LLC's agent), including, without limitation, items presented for payment, or any order or instruction directing the disposition of funds or other assets held in or credited to the Prepay LLC Capital Account.

(c) To the extent the SPE Custodian determines that Prepay LLC is obligated to post collateral based on the SPE Custodian's calculations as Valuation Agent under and as defined in the Credit Support Annex to the Back-End Commodity Swap, the SPE Custodian shall withdraw the required amounts from the Prepay LLC Capital Account and pay them by wire transfer to the accounts designated by the Swap Counterparty pursuant to the Back-End Commodity Swap.

(d) Following the application of any amounts pursuant to the foregoing Section 5(c), to the extent funds on deposit in the Prepay LLC Revenue Account are insufficient for Prepay LLC to make the payments specified in Section 4(c) for any given Month, the SPE Custodian shall promptly provide notice of the deficiency via e-mail to the Trustee, the applicable Swap Counterparty and each of the parties hereto and Prepay LLC hereby directs the SPE Custodian to withdraw the required amounts from the Prepay LLC Capital Account and deposit such amounts in the Prepay LLC Revenue Account.

(e) To the extent that (i) the Prepay LLC Capital Amount exceeds the greater of (a) 3% of the amount specified in Exhibit B hereto for the then-current calendar month (taking into account undrawn loans and equity commitments from the Member), or (b) \$4,000,000 after the payments specified in Section 4(c) and Section 5(d), as applicable and (ii) (a) the Prepay LLC Capital Amount exceeds the Debt Service Reserve Requirement plus the Minimum Amount, or (b) a Rating Confirmation is received to permit a withdrawal from the Prepay LLC Capital Account (the lesser of the excesses determined under clauses (i) and (ii) above (or with respect to clause (ii), the amount permitted by the Rating Confirmation) being the "Maximum Withdrawal Amount"), then each Month, Prepay LLC directs the SPE Custodian to withdraw amounts on deposit in the Prepay LLC Capital Account, up to the Maximum Withdrawal Amount, to be applied as directed by Prepay LLC to the principal and interest amounts owed by Prepay LLC to J. Aron under the J. Aron Subordinated Loans or any distribution being made by Prepay LLC to J. Aron in its capacity as the sole member of Prepay LLC; provided that the SPE Custodian shall not be required to transfer any amount from the Prepay LLC Capital Account for the monthly payment of any distribution or any principal and interest on the J. Aron Subordinated Loans if the remaining balance in the Prepay LLC Capital Account following such transfer will be less than \$4,000,000. Notwithstanding the foregoing, Prepay LLC hereby directs the SPE Custodian to pay the outstanding principal and interest due under the J. Aron Subordinated Loans to J. Aron (as such amounts are specified in the written payment instructions delivered by J. Aron pursuant to Section 3(a)) on the earlier of (i) the first Business Day of the Month following an Early Termination Payment Date and (ii) the Maturity Date (as defined in the J. Aron Subordinated Loans) to the extent amounts are then available in the Prepay LLC Capital Account. Upon receipt of the outstanding principal and interest due under the J. Aron Subordinated Loans, J. Aron will provide the SPE Custodian with written notice, in accordance with the terms of Section 15, that the J. Aron Subordinated Loans have been repaid in accordance with its terms, and this Custodial Agreement shall terminate as provided in Section 15. As used herein, the "Prepay LLC Capital Amount" means, at any time, the sum of (x) amounts then on deposit in the Prepay LLC Capital Account, (y) amounts then on deposit in the Prepay LLC Put Receivables

Account, plus (z) all committed amounts then available for Prepay LLC to draw under the J. Aron Subordinated Loans, as notified by Prepay LLC to the SPE Custodian from time to time.

(f) Amounts deposited in the Prepay LLC Capital Account shall, at Prepay LLC's written request and direction, be invested by the SPE Custodian in Cash Equivalents (as defined below) as specifically directed (which may include standing instructions), subject to any investment cut-offs of any Cash Equivalent investments directed by Prepay LLC. The SPE Custodian shall have no duty to determine whether any investment or reinvestment of monies in the Prepay LLC Capital Account satisfies the criteria set out in the definition of "Cash Equivalents." The SPE Custodian shall not be liable for any loss resulting from any investment in any Cash Equivalents or the sale, disposition, redemption or liquidation of such investment or by reason of the fact that the proceeds realized in respect of such sale, disposition, redemption or liquidation were less than the amounts which might otherwise have been obtained.

(g) In the event that any Cash Equivalents are required to be liquidated in order to make any transfer, disbursement or withdrawal in accordance with this Custodial Agreement, the SPE Custodian shall comply with any written instruction from Prepay LLC with respect to the liquidation of such Cash Equivalents and shall in accordance with such written instructions, sell or otherwise liquidate into cash (without regard to maturity) such Cash Equivalents as are necessary in order to make such transfers, disbursements or withdrawals required pursuant to this Custodial Agreement. In the event any such investments are redeemed prior to the maturity thereof, the SPE Custodian shall not be liable for any loss or penalties relating thereto.

As used herein, "Cash Equivalents" means, at any time:

(i) any direct obligation of (or any obligation that is unconditionally guaranteed by) the United States (or any agency or political subdivision thereof, to the extent such obligations are supported by the full faith and credit of the United States) maturing not more than two years from the date of acquisition thereof;

(ii) any certificate of deposit, time deposit, or banker's acceptance, maturing not more than one year after its date of acquisition, or any demand deposit account which, in any case, is issued by or established at any bank or trust company organized under the laws of the United States (or any state thereof) and any country that is a member of the Organization for Economic Cooperation and Development or any political subdivision thereof, and which: (A) has: (I) a long term debt credit rating of A2 or higher from Moody's or A or higher from S&P (or, if at any time neither S&P nor Moody's is rating such obligations, an equivalent rating from another nationally recognized rating service); or (II) a combined capital and surplus greater than \$250,000,000; or (B) is the SPE Custodian;

(iii) money market funds that: (A) comply with the criteria set forth in Rule 2a-7 under the Investment Company Act of 1940; (B) are rated A or higher by S&P and A2 or higher by Moody's; or (C) have a combined capital and surplus of at least \$500,000,000;

(iv) demand deposits, including interest bearing money market accounts, time deposits, overnight bank deposits, interest-bearing deposits, and certificates of deposit or banker's acceptances of depository institutions rated in the AA/Aa2 long-term ratings category or higher by S&P or Moody's or which are fully FDIC-insured; or

(v) cash.

Section 6. Reserved.

Section 7. SPE Custodian.

(a) The SPE Custodian shall have (i) no liability under any agreement other than this Custodial Agreement and (ii) no duty to inquire as to the provisions of any agreement other than this Custodial Agreement, the Funding Agreement, the Prepaid Agreement, the Commodity Sale and Service Agreement, the J. Aron Subordinated Loans and the Back-End Commodity Swap; provided, however, that the SPE Custodian shall have no duties or responsibilities whatsoever except such duties and responsibilities as are specifically set forth in this Agreement. The SPE Custodian may rely upon and shall not be liable for acting or refraining from acting upon any written notice, document, instruction or request furnished to it hereunder and believed by it to be genuine and to have been signed or presented by the proper party or parties. The SPE Custodian shall be under no duty to inquire into or investigate the validity, accuracy or content of any such document, notice, instruction or request. The SPE Custodian shall have no duty to solicit any payments which may be due it. The SPE Custodian (in its capacity as SPE Custodian and Valuation Agent) shall not be liable for any action taken or omitted by it in good faith except to the extent that a court of competent jurisdiction determines that the SPE Custodian's gross negligence or willful misconduct was the primary cause of any loss to any party hereto. In connection with the execution of any of its powers or the performance of any of its duties hereunder, the SPE Custodian may consult with counsel, accountants and other skilled Persons selected and retained by it. The SPE Custodian shall not be liable for anything done, suffered or omitted in good faith by it in accordance with the advice or opinion of any such counsel, accountants or other skilled Persons, provided the SPE Custodian exercised due care and good faith in the selection of such Person. The permissive rights of the SPE Custodian to take actions enumerated under this Custodial Agreement shall not be construed as duties. Notwithstanding anything to the contrary in this Custodial Agreement, the Funding Agreement, the Prepaid Agreement, the Commodity Sale and Service Agreement, the J. Aron Subordinated Loans and the Back-End Commodity Swap, the SPE Custodian shall not be required to exercise any rights or remedies under this Custodial Agreement or otherwise take any action or refrain from taking any action unless it shall have been directed to do so in a writing by Prepay LLC, Issuer or the Trustee which is authorized or permitted to be given under this Custodial Agreement. So long as the SPE Custodian has requested instructions from one or more of Prepay LLC, Issuer or the Trustee in a timely manner regarding a matter or determination for which such party has the right provide instructions hereunder, the SPE Custodian shall not be liable for any delay in acting that is attributable to a delay or failure by Prepay LLC, Issuer or the Trustee in providing such instructions to the SPE Custodian, and the SPE Custodian shall be fully protected, and shall incur no liability whatsoever to Prepay LLC, Issuer, the Trustee, the Swap Counterparty or any other Person in connection with, in acting (or failing to act) pursuant to such instructions, provided that

such instructions (i) are reasonably believed to have been given by an Authorized Officer and (ii) are authorized or permitted to be given under this Custodial Agreement. In the event that the SPE Custodian shall be uncertain as to its duties or rights hereunder or shall receive instructions, claims or demands from any party hereto which, in its opinion, conflict with any of the provisions of this Custodial Agreement, it shall be entitled to refrain from taking any action and its sole obligation shall be to keep safely all property held in escrow until it shall be directed otherwise in writing by all of the other parties hereto or by a final order or judgment of a court of competent jurisdiction. The SPE Custodian may interplead all of the assets held hereunder into a court of competent jurisdiction or may seek a declaratory judgment with respect to certain circumstances, and thereafter be fully relieved from any and all liability or obligation with respect to such interpleaded assets or any action or non-action based on such declaratory judgment. Anything in this Custodial Agreement to the contrary notwithstanding, in no event shall the SPE Custodian be liable for special, indirect, incidental or consequential damages, losses or penalties of any kind whatsoever (including but not limited to lost profits), regardless of the form of action.

(b) The parties hereto acknowledge and agree that the SPE Custodian is not a fiduciary by virtue of accepting and carrying out its obligations under this Custodial Agreement and has not accepted any fiduciary duties, responsibilities or liabilities with respect to its services hereunder. The SPE Custodian shall not be required to risk or expend its own funds in performing its obligations under this Custodial Agreement. If and to the extent that Prepay LLC instructs the SPE Custodian to settle transactions in the Prepay LLC Revenue Account, Prepay LLC (i) shall cause all such transactions to be fully funded by depositing with the SPE Custodian sufficient immediately available funds (provided that this requirement shall be satisfied if sufficient funds are available in the Prepay LLC Capital Account for transfer to the Prepay LLC Revenue Account consistent with Section 5(d) of this Custodial Agreement), (ii) shall not rely on the SPE Custodian to extend credit in order to settle any such transaction, and (iii) acknowledges that any transactions not fully funded by Prepay LLC may fail to settle. Subject to the requirements of Section 5(d) of this Custodial Agreement, if the SPE Custodian, in its sole discretion, permits an overdraft in the Prepay LLC Revenue Account or if Prepay LLC is for any other reason indebted to the SPE Custodian, Prepay LLC shall immediately deliver for credit to the Prepay LLC Revenue Account sufficient cash to eliminate such debit balance, plus accrued interest at a rate then charged by the SPE Custodian to its institutional custody clients in the relevant currency, which rate shall be supplied by the SPE Custodian to Prepay LLC from time to time.

Section 8. Removal, Resignation and Succession.

(a) The SPE Custodian may be removed with 30 days' prior written notice by Prepay LLC, with a copy to each of the other parties hereto. Notwithstanding the foregoing, any such removal of the SPE Custodian shall not be effective until a successor SPE Custodian has been appointed pursuant to this Section 8. The SPE Custodian's rights under this Custodial Agreement to indemnity and any amounts due and payable to the SPE Custodian shall survive any such removal.

(b) The SPE Custodian may resign and be discharged from its duties or obligations hereunder by giving not less than 30 days' advance notice in writing of such resignation to the other parties hereto specifying a date when such resignation shall take effect; and such resignation shall take effect upon the day specified in such notice unless a successor has not been appointed by the other parties to this Custodial Agreement on such date, in which event such resignation shall not take effect until a successor is appointed.

(c) In case at any time the SPE Custodian shall resign or shall be removed or shall become incapable of acting, or shall be adjudged bankrupt or insolvent, or if a receiver, liquidator or conservator of the SPE Custodian, or of its property, shall be appointed, or if any public officer shall take charge or control of the SPE Custodian, or of its property or affairs, Prepay LLC, Issuer and J. Aron shall use their commercially reasonable efforts to appoint a successor custodian in a timely fashion, provided that any custodian appointed in succession to the SPE Custodian shall be a bank or trust company organized under the laws of any state or a national banking association and shall have capital stock, surplus and undivided earnings aggregating at least \$50,000,000 and shall be a bank with trust powers or a trust company willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by this Custodial Agreement. Any corporation or association into which the SPE Custodian may be merged or converted or with which it may be consolidated, or any corporation or association to which all or substantially all of the SPE Custodian's corporate trust line of business may be transferred, shall be the SPE Custodian under this Custodial Agreement without further act. Notwithstanding the foregoing, if no appointment of a successor SPE Custodian shall be made pursuant to the foregoing provisions of this Section 8 within 30 days after (i) Prepay LLC has given notice to the SPE Custodian and the other parties hereto of the SPE Custodian's removal as provided in this Section 8 or (ii) the SPE Custodian has given to the other parties hereto written notice of its resignation as provided in this Section 8, the SPE Custodian may apply to any court of competent jurisdiction to appoint a successor SPE Custodian. Said court may thereupon, after such notice, if any, as such court may deem proper, appoint a successor SPE Custodian.

Section 9. Fees. J. Aron, as the sole member of Prepay LLC, agrees to pay the SPE Custodian reasonable compensation for the services to be rendered hereunder, which compensation shall be \$32,500.00 for each year that this Custodial Agreement is in effect and shall be invoiced annually. The initial fee shall be calculated on a pro rata basis and shall be invoiced on May 1, 2024, and thereafter, on May 1 of each subsequent year. J. Aron further agrees to pay or reimburse the SPE Custodian upon request for all expenses, disbursements and advances, including reasonable attorney's fees and expenses, incurred or made by it in connection with the preparation, execution, performance, delivery, modification and termination of this Custodial Agreement.

Section 10. Reimbursement. Prepay LLC agrees to reimburse the SPE Custodian and its directors, officers, agents and employees for any and all loss, liability or expense (including the fees and expenses of in-house or outside counsel and experts and their staffs and all expense of document location, duplication and shipment) arising out of or in connection with (a) its acting as the SPE Custodian under this Custodial Agreement, except to the extent that such loss, liability or expense is finally adjudicated to have been caused primarily by the gross negligence or willful misconduct of the SPE Custodian or such director, officer, agent or employee seeking

reimbursement, or (b) its following any instructions or other directions from Prepay LLC, except to the extent that such instruction or direction is not authorized or permitted to be given under this Custodial Agreement; provided, however, that any amounts due under this Section 10 shall not duplicate any other amounts due under this Custodial Agreement, including without limitation amounts due under Section 17 hereof. The parties hereto acknowledge that this provision shall survive the resignation or removal of the SPE Custodian or the termination of this Custodial Agreement.

Section 11. Taxpayer Identification Numbers; Tax Matters. Prepay LLC represents that its correct taxpayer identification number assigned by the Internal Revenue Service or any other taxing authority is set forth on the signature page hereof. Any tax returns or reports required to be prepared and filed in connection with the Prepay LLC Revenue Account and the Prepay LLC Capital Account will be prepared and filed by Prepay LLC and the SPE Custodian shall have no responsibility for the preparation and/or filing of any tax return with respect to any income earned on the Prepay LLC Revenue Account and the Prepay LLC Capital Account. In addition, any tax or other payments required to be made pursuant to such tax return or filing shall be paid by Prepay LLC. The SPE Custodian shall have no responsibility for making such payment unless directed to do so by the appropriate authorized party.

Section 12. Notices. All communications hereunder shall be in writing and shall be deemed to be duly given and received (a) upon delivery if delivered personally or upon confirmed transmittal if by facsimile; (b) on the next Business Day if sent by overnight courier; or (c) four Business Days after mailing if mailed by prepaid registered mail, return receipt requested, to the appropriate notice address for each of the parties set forth in Exhibit A.

Any party may provide a new or different address for such notices or its wire instructions set forth in Exhibit A if furnished to the other parties in writing by registered mail, return receipt requested, provided furthermore that Prepay LLC may provide updated wire instructions pursuant to the foregoing for any of its contractual counterparties who are not party to this Agreement. Notwithstanding the above provisions of this Section 12, (i) in the case of communications delivered to the SPE Custodian pursuant to clause (b) or clause (c) of this Section 12 above, such communications shall be deemed to have been given on the date received by the SPE Custodian and (ii) in the case of the notifications required pursuant to Section 3(b), such notices may be given by e-mail to an e-mail address provided by the Funding Recipient to the SPE Custodian from time to time. In the event that the SPE Custodian, in its sole discretion, shall determine that an emergency exists, the SPE Custodian may use such other means of communication as the SPE Custodian deems appropriate.

Notwithstanding anything else in this Custodial Agreement to the contrary, the SPE Custodian shall have the right to accept and act upon instructions or directions provided by a party pursuant to this Custodial Agreement or by the Trustee, or any other document reasonably relating to the Bonds, if delivered using Electronic Means (as defined below); provided, however, that the applicable party shall provide to a Responsible Officer of the SPE Custodian an incumbency certificate listing designated individuals with the authority to provide such instructions (each an "Authorized Officer") and containing specimen signatures of such Authorized Officers, which incumbency certificate shall be amended, with written notice to a Responsible Officer of the SPE Custodian, whenever an individual is to be added or deleted from

the listing. If a party elects to give the SPE Custodian directions or instructions using Electronic Means and the SPE Custodian in its discretion elects to act upon such directions, the SPE Custodian's understanding of such directions shall be deemed controlling. The party giving such instructions to the SPE Custodian understands and agrees that the SPE Custodian cannot determine the identity of the actual sender of such directions and that the SPE Custodian may conclusively presume that directions that purport to have been sent by an Authorized Officer listed on the incumbency certificate provided to a Responsible Officer of the SPE Custodian have been sent by such Authorized Officer. The party giving such instructions shall be solely responsible for ensuring that only Authorized Officers of such party transmit such directions to the SPE Custodian and that the party and all Authorized Officers treat applicable user and authorization codes, passwords and/or authentication keys as confidential and with extreme care. The SPE Custodian shall not be liable for any losses, costs or expenses arising directly or indirectly from its reliance upon and compliance with such instructions notwithstanding that such instructions conflict or are inconsistent with a subsequent written instruction. The party giving such instructions to the SPE Custodian agrees: (i) to assume all risks arising out of the use of Electronic Means (as defined below) to submit directions to the SPE Custodian, including without limitation the risk of the SPE Custodian acting on unauthorized directions, and the risk of interception and misuse by third parties; (ii) that it is fully informed of the protections and risks associated with the various methods of transmitting directions to the SPE Custodian and that there may be more secure methods of transmitting directions; (iii) that the security procedures (if any) to be followed in connection with its transmission of directions provide to it a commercially reasonable degree of protection in light of its particular needs and circumstances, (iv) to notify the SPE Custodian immediately upon learning of any compromise or unauthorized use of the security procedures; and (v) to indemnify and hold harmless the SPE Custodian against any and all claims, losses, damages, liabilities, judgments, costs and expenses (including reasonable attorneys' fees) incurred or sustained by the SPE Custodian as a result of or in connection with the SPE Custodian's reliance upon and compliance with instructions or directions given by Electronic Means (as defined below), except for any claim, damage or loss resulting from the gross negligence or willful misconduct of the SPE Custodian (provided that, for the avoidance of doubt, any amounts due under clause (v) of this Section 12 above shall not duplicate any other amounts due under this Custodial Agreement, including without limitation amounts due under Section 10 or Section 17 hereof).

As used herein, "Electronic Means" shall mean instructions sent by S.W.I.F.T, e-mail, facsimile and other similar secure electronic transmission platform containing applicable authorization codes, passwords and/or authentication keys issued by the SPE Custodian ("Secure Platform") or another method or system specified by a Responsible Officer of the SPE Custodian as available for use in connection with the SPE Custodian's services hereunder. Access to and use of the SPE Custodian's systems shall be subject to the terms and conditions contained in a separate written agreement. Prepay LLC, J. Aron and the Issuer shall be responsible for requesting access to any such system of the SPE Custodian and completing the documentation required for such access and nothing herein shall obligate the SPE Custodian to ensure any such access and the SPE Custodian shall have no responsibility or liability should such parties fail to, or elect not to, avail itself of such access. If the parties elect to use an on-line communications system owned or operated by a third party, the SPE Custodian shall have no responsibility or liability for the reliability or availability of any such service. All funds transfer instructions shall be sent utilizing a Secure Platform unless otherwise agreed by the SPE Custodian. When

instructed to credit or pay a party by both name and a unique numeric or alpha-numeric identifier (e.g. ABA number or account number), the SPE Custodian, and any other bank participating in the funds transfer, may rely solely on the unique identifier, even if it identifies a party different than the party named. This applies to beneficiaries as well as any intermediary bank. The parties hereto agree to be bound by the rules of any funds transfer network used in connection with any payment order accepted by the SPE Custodian hereunder.

To the extent that any Cash Equivalents in which cash may be invested pursuant to Section 5(f) affords to the owner thereof the ability to exercise any rights or discretionary actions, the SPE Custodian agrees, as promptly as practicable under the circumstances, to notify Prepay LLC thereof, provided that the SPE Custodian, in its capacity as custodian of such Cash Equivalents, has actually received notice of such right or discretionary action from the relevant issuer, transfer agent or depository. Without actual receipt of such notice by the SPE Custodian, the SPE Custodian shall have no liability for failing to so notify Prepay LLC. Prepay LLC or its designee shall be solely responsible for making any decisions relating thereto and for directing Custodian to act. In order for the SPE Custodian to act, it must receive Prepay LLC's Corporate Action Instructions (defined below) by such time as the SPE Custodian shall advise Prepay LLC or its designee. If Custodian does not receive such Corporate Action Instructions by such deadline, the SPE Custodian shall not be liable for failure to take any action relating to or to exercise any rights conferred by such Cash Equivalents. For the avoidance of doubt, any instruction given to the SPE Custodian relating to the exercise of rights or discretionary actions pursuant to this paragraph, must be given exclusively by Corporate Action Instructions.

As used herein "Corporate Action Instructions" shall mean instructions delivered to SPE Custodian by Electronic Means, other than e-mail. Corporate Action Instructions sent by facsimile shall be sent to the following number 844-299-3627 (which such number may be changed from time to time as the SPE Custodian may designate in writing).

Section 13. Miscellaneous.

(a) The provisions of this Custodial Agreement may be waived, altered, amended or supplemented, in whole or in part, only by a writing signed by all of the parties hereto.

(b) Neither this Custodial Agreement nor any right or interest hereunder may be assigned in whole or in part by any party, except as provided in Section 8, without the prior consent of the other parties; provided that, notwithstanding the foregoing, the parties acknowledge and agree that Prepay LLC shall assign all of its right, title and interest in, to and under this Agreement in connection with any assignment by Prepay LLC of its right, title and interest in, to and under the Prepaid Agreement consistent with the terms thereof to the same assignee, which assignment shall constitute a novation and shall not require the consent of the other parties hereto. It is acknowledged and agreed that the SPE Custodian may require any assignee to furnish to the SPE Custodian certain requested information to allow the SPE Custodian to complete its "Know Your Customer" procedures and such assignment is subject to the satisfactory completion by the SPE Custodian of its applicable customer identification procedures as in effect from time to time.

(c) This Custodial Agreement and the rights and duties of the parties hereunder shall be governed by and construed, enforced, and performed in accordance with the laws of the State of New York, without regard to any conflicts of law principle that would direct the application of the laws of another jurisdiction.

(d) Each party hereto irrevocably waives any objection on the grounds of venue, forum non-conveniens or any similar grounds and irrevocably consents to service of process by mail or in any other manner permitted by applicable law and consents to the exclusive jurisdiction of (A) the courts of the State of New York located in the Borough of Manhattan, (B) the federal courts of the United States of America for the Southern District of New York or (C) the federal courts of the United States of America in any other state. The parties further hereby waive any right to a trial by jury with respect to any lawsuit or judicial proceeding arising or relating to this Custodial Agreement.

(e) No party to this Agreement shall be liable to any other party hereto for losses due to, or if it is unable to perform its obligations under the terms of this Agreement because of, strikes, work stoppages, acts of war or terrorism, insurrection, revolution, epidemics, pandemics, nuclear or natural catastrophes or acts of God, or interruptions, loss or malfunctions of utilities, communications or computer (software and hardware) services, or other causes reasonably beyond its control; provided that a party affected by any such event shall exercise commercially reasonable efforts to resume performance as quickly as possible.

(f) This Custodial Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. All signatures of the parties to this Custodial Agreement may be transmitted by facsimile or by digital pdf transmission, and such facsimile or pdf will, for all purposes, be deemed to be the original signature of such party whose signature it reproduces, and will be binding upon such party.

(g) The Bank of New York Mellon Corporation is a global financial organization that operates in and provides services and products to clients through its affiliates and subsidiaries located in multiple jurisdictions (the “BNY Mellon Group”). The BNY Mellon Group may (i) centralize in one or more affiliates and subsidiaries certain activities (the “Centralized Functions”), including audit, accounting, administration, risk management, legal, compliance, sales, product communication, relationship management, and the compilation and analysis of information and data regarding Prepay LLC (which, for purposes of this provision, includes the name and business contact information for Prepay LLC’s employees and representatives) and the accounts established pursuant to this Custodial Agreement (the “Customer Information”) and (ii) use third party service providers to store, maintain and process the Customer Information (“Outsourced Functions”). Notwithstanding anything to the contrary contained elsewhere in this Custodial Agreement and solely in connection with the Centralized Functions and/or Outsourced Functions, Prepay LLC consents to the disclosure of, and authorizes the SPE Custodian to disclose, the Customer Information to (i) other members of the BNY Mellon Group (and their respective officers, directors and employees) and to (ii) third-party service providers (but solely in connection with Outsourced Functions), in each case, who are required to maintain the confidentiality of the Customer Information. In addition, the BNY Mellon Group may aggregate information regarding Prepay LLC and its accounts (“Customer-Related Data”) with other data

collected and/or calculated by the BNY Mellon Group (the “Aggregated Data”). The BNY Mellon Group will own all such Aggregated Data, provided that the Aggregated Data shall not identify, in any way, Prepay LLC or any of its assets, financial or trading information, or other proprietary information, and the BNY Mellon Group agrees that it shall not distribute the Aggregated Data in a format that identifies Customer-Related Data (whether separately or with Aggregated Data) with Prepay LLC. Prepay LLC represents that it is authorized to consent to the foregoing and that the disclosure of the Customer Information in connection with the Centralized Functions and/or Outsourced Functions does not violate any relevant data protection legislation. Prepay LLC also consents to the disclosure of the Customer Information to the extent required by law.

(h) Exhibit B sets forth the prepayment balance for each Month during the initial Interest Rate Period. In connection with the establishment of successive Interest Rate Periods, Prepay LLC shall prepare and deliver to the other parties no later than the last day of the then-current Interest Rate Period an updated Exhibit B setting forth the prepayment balance for each Month of such successive Interest Rate Period, in which case such updated Exhibit B will be effective as of the first day of the next Interest Rate Period.

Section 14. Compliance with Court Orders. In the event that any amount held by the SPE Custodian under this Custodial Agreement shall be attached, garnished or levied upon by any court order, or the delivery thereof shall be stayed or enjoined by an order of a court, or any order, judgment or decree shall be made or entered by any court affecting the property deposited under this Custodial Agreement, the SPE Custodian is hereby expressly authorized, in its sole discretion, to obey and comply with all writs, orders or decrees so entered or issued, which it is advised by legal counsel of its own choosing are binding upon it, whether with or without jurisdiction, and in the event that the SPE Custodian obeys or complies with any such writ, order or decree it shall not be liable to any of the parties hereto or to any other person, firm or corporation by reason of such compliance, notwithstanding that such writ, order or decree may be subsequently reversed, modified, annulled, set aside or vacated.

Section 15. Term; Winding Up. This Custodial Agreement shall expire concurrently with the receipt of written notice from Prepay LLC, with a copy to the other parties, that the J. Aron Subordinated Loans have been repaid in accordance with its terms. Any remaining balance in the Prepay LLC Revenue Account or the Prepay LLC Capital Account shall be paid to an account specified by J. Aron as the sole member of Prepay LLC following written confirmation (a) from the Trustee that (i) all required payments to each Swap Counterparty under the Back-End Commodity Swap have been paid to the Swap Payments Accounts and (ii) all required payments to Issuer under the Prepaid Agreement, and (b) from J. Aron that all required payments to J. Aron under the Commodity Sale and Service Agreement have been paid.

Section 16. Third Party Beneficiaries. The Swap Counterparty shall be a third party beneficiary of this Custodial Agreement with the right to enforce the provisions hereof relating to payments to the Swap Payments Accounts. Except as provided in the immediately preceding sentence, it is specifically agreed that there are no other third-party beneficiaries of this Custodial Agreement and that this Custodial Agreement shall not impart any rights enforceable by any other Person not a party to this Custodial Agreement.

Section 17. Indemnification. Prepay LLC agrees to protect, indemnify, defend and hold harmless the SPE Custodian (in its capacity as SPE Custodian and Valuation Agent hereunder) and its affiliates, and each Person who controls the SPE Custodian, from and against all claims, losses, liabilities, actions, suits, costs, judgments and expenses (including court costs and reasonable attorneys' fees) arising from its acting as SPE Custodian and Valuation Agent hereunder, except for any claim, damage or loss resulting from the gross negligence or willful misconduct of the SPE Custodian; provided, however, that any amounts due under this Section 17 shall not duplicate any other amounts due under this Custodial Agreement, including without limitation amounts due under Section 10 hereof. The obligations of this Section 17 shall survive any resignation or removal of the SPE Custodian and the termination of this Custodial Agreement. Prepay LLC hereby grants the SPE Custodian a lien, right of set-off, and security interest in the Prepay LLC Capital Account for the payment of any claim by the SPE Custodian for compensation, reimbursement or indemnity under this Custodial Agreement. In this regard, the SPE Custodian shall be entitled to all the rights and remedies of a pledgee and secured creditor under applicable laws, rules or regulations as then in effect.

Section 18. USA PATRIOT Act. The parties acknowledge that the SPE Custodian is subject to federal laws, including the Customer Identification Program (“CIP”) requirements under the USA PATRIOT Act and its implementing regulations, pursuant to which the SPE Custodian must obtain, verify and record information that allows the SPE Custodian to identify Prepay LLC. Accordingly, prior to opening the Prepay LLC Revenue Account described in Section 4 of this Custodial Agreement, the SPE Custodian will ask Prepay LLC to provide certain information, including but not limited to name, physical address, tax identification number and other information that will help the SPE Custodian identify and verify Prepay LLC's identity, such as organizational documents, certificate of good standing, license to do business, or other pertinent identifying information. Prepay LLC agrees that the SPE Custodian cannot open any account under this Custodial Agreement unless and until the SPE Custodian verifies Prepay LLC's identity in accordance with its CIP.

Section 19. Agents.

(a) Pursuant to the terms of the Bond Indenture, Issuer has irrevocably appointed the Trustee as its agent to issue notices and, as directed under the Bond Indenture, to take any other actions that Issuer is required or permitted to take under this Custodial Agreement. The SPE Custodian may rely on notices or other actions taken by Issuer or the Trustee.

(b) Pursuant to the terms of the Commodity Sale and Service Agreement, Prepay LLC has irrevocably appointed J. Aron as its agent to issue notices and to take any other actions that Prepay LLC is required or permitted to take under this Custodial Agreement. The SPE Custodian may rely on notices or other actions taken by Prepay LLC or J. Aron.

Section 19. Special Resolution Regime.

(a) In the event the SPE Custodian, Prepay LLC or J. Aron (each, a “Covered Entity”) becomes subject to a proceeding under a U.S. special resolution regime, the transfer of this Custodial Agreement (and any interest and obligation in or under, and any property securing, this Custodial Agreement) from such Covered Entity will be effective to the same extent as the

transfer would be effective under the U.S. special resolution regime if this Custodial Agreement (and any interest and obligation in or under, and any property securing, this Custodial Agreement) were governed by the laws of the United States or a state of the United States.

(b) In the event any Covered Entity or any of its affiliates becomes subject to a proceeding under a U.S. special resolution regime, default rights with respect to this Custodial Agreement that may be exercised against such Covered Entity are permitted to be exercised to no greater extent than the default rights could be exercised under the U.S. special resolution regime if this Custodial Agreement were governed by the laws of the United States or a state of the United States.

(c) For the avoidance of doubt, except as expressly provided above, the foregoing does not in any way modify, affect or amend the duties, rights and obligations of any of the parties under this Custodial Agreement.

Section 20. Sanctions.

(a) Throughout the term of this Agreement, J. Aron (on behalf of itself and Prepay LLC): (i) will have in place and will implement policies and procedures designed to prevent violations of Sanctions (defined below), including measures to accomplish effective and timely scanning of all relevant data with respect to its clients and with respect to incoming or outgoing assets or transactions relating to this Agreement; (ii) shall exercise commercially reasonable efforts to ensure that neither it nor any of its affiliates, directors, officers, employees is an individual or entity that is, or is owned or controlled by an individual or entity that is: (A) the target of Sanctions; or (B) located, organized or resident in a country or territory that is, or whose government is, the target of Sanctions.

(b) J. Aron and Prepay LLC shall not, directly or indirectly, use the services and/or the Prepay LLC Revenue Account or the Prepay LLC Capital Account in any manner that would result in its violation of Sanctions.

(c) Prepay LLC and J. Aron will promptly provide to the SPE Custodian such information as the SPE Custodian reasonably requests in connection with the matters referenced in this Section, including information regarding Prepay LLC and J. Aron and the Prepay LLC Revenue Account and the Prepay LLC Capital Account and the cash or Cash Equivalents held, therein in relation to which services are to be provided hereunder and the source thereof, and the identity of any individual or entity having or claiming an interest therein. The SPE Custodian may decline to act or provide services in respect of an account, and take such other actions as it, in its reasonable discretion, deems necessary or advisable, in connection with the matters referenced in this Section. If the SPE Custodian declines to act or provide services as provided in the preceding sentence, except as otherwise prohibited by applicable law or official request, the Custodian will inform the other parties hereto as soon as reasonably practicable.

As used herein, “Sanctions” means all economic sanctions laws, rules, regulations, executive orders and requirements administered by any governmental authority of the United States (including the Office of Foreign Assets Control (OFAC) of the U.S. Department of the Treasury) or any other applicable domestic or foreign authority.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties hereto have caused this Custodial Agreement to be duly executed and delivered by their respective duly Authorized Officers as of the date first written above.

ARON ENERGY PREPAY 33 LLC
By: J. Aron & Company LLC, its Manager

By: _____
Name: _____
Title: _____
Taxpayer ID Number: _____

J. ARON & COMPANY LLC

By: _____
Name: _____
Title: _____

NORTHERN CALIFORNIA ENERGY
AUTHORITY

By: _____
Name: _____
Title: _____

THE BANK OF NEW YORK MELLON, as
SPE Custodian

By: _____
Name: _____
Title: _____

EXHIBIT A

NOTICE ADDRESSES AND WIRE INSTRUCTIONS

[To be completed post-closing.]

EXHIBIT B
PREPAYMENT BALANCE

[To be attached.]

ARON ENERGY PREPAY 33 LLC

By: J. Aron & Company LLC, its Manager

By:

Name:

Title:

SCHEDULE I
Valuation Services Terms and Conditions

1. On each Valuation Date, Valuation Agent shall determine the Delivery Amount and the Return Amount as herein described. Capitalized terms used but not otherwise defined shall have the meanings assigned to such terms in the Credit Support Annex to the Back-End Commodity Swap.
2. On the Business Day prior to each Valuation Date as set forth in the Credit Support Annex to the Back-End Commodity Swap, Prepay LLC shall provide the Exposure under the Back-End Commodity Swap to the Valuation Agent. The Valuation Agent shall calculate the Delivery Amount and the Return Amount consistent with the terms of the Credit Support Annex (i.e., the Exposure minus the Posted Collateral and the rounding and Minimum Transfer Amount specified in the Credit Support Annex). On each Valuation Date prior to the Notification Time specified in the Credit Support Annex to the Back-End Commodity Swap, Valuation Agent shall transmit to Prepay LLC and Swap Counterparty a report ("Report") via e-mail of the values and other amounts determined in accordance with the preceding sentence. By electing to use e-mail for this purpose, Prepay LLC acknowledges that such transmissions are not encrypted and therefore are unsecure. Prepay LLC further acknowledges that there are other risks inherent in communicating through the internet such as the possibility of virus contamination and disruptions in service, and agrees that Valuation Agent shall not be responsible for any loss, damage or expense suffered or incurred by any of the parties hereto or any other person claiming by or through the parties as a result of the use of such method.
3. Reports shall be produced on a basis and in such form and content as shall be mutually agreed between Valuation Agent and Prepay LLC. Prepay LLC shall examine (or cause to be examined) each Report and notify Valuation Agent of any error, omission or discrepancy by the close of business on the Business Day immediately following receipt of such Report. The parties hereto acknowledge and agree that unless Valuation Agent is notified in writing of any error, omission or discrepancy by the close of the Business Day following receipt, each Report shall be deemed to be correct and conclusive in all respects, absent manifest error. In the event of any errors or omissions in any Report, Valuation Agent's sole responsibility and liability shall be the preparation of a corrected Report at no additional cost.
4. Valuation Agent is authorized to utilize any generally recognized pricing or other information service providers reasonably believed by it to be reliable in order to perform its valuation and other responsibilities hereunder. The parties hereto understand and agree that certain pricing information with respect to complex financial instruments (e.g., derivatives) may be based on calculated amounts rather than actual market transactions and may not reflect actual market values, and that the variance between such calculated amounts and actual market values may or may not be material. Where pricing and other information service providers do not provide information for particular securities or other property, Prepay LLC may advise Valuation Agent regarding the fair market value of, or provide other information with respect to, such securities or property as determined by it in good faith. It is acknowledged and agreed that information supplied by such pricing or other information service providers may be incorrect or

incomplete and Valuation Agent shall not be liable for any loss, damage or expense incurred as a result of errors or omissions with respect to any pricing or other information utilized by Valuation Agent hereunder.

DRAFT NCEA-SMUD PRELIMINARY OFFICIAL STATEMENT

PRELIMINARY OFFICIAL STATEMENT DATED _____, 2024

NEW ISSUE - BOOK-ENTRY ONLY

RATING: (SEE "RATING" HEREIN)

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to NCEA, based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, and the Bonds and the interest thereon are exempt from State of California personal income taxes. In the further opinion of Bond Counsel, interest on the Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. Bond Counsel observes that interest on the Bonds included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Bonds. See "TAX MATTERS" herein.

\$000,000,000*

NORTHERN CALIFORNIA ENERGY AUTHORITY
COMMODITY SUPPLY REVENUE REFUNDING BONDS, SERIES 2024

DATED: Date of Delivery

DUE: As shown on the inside cover

The Northern California Energy Authority ("NCEA") is issuing its Commodity Supply Revenue Refunding Bonds, Series 2024 (the "Bonds") under an Amended and Restated Trust Indenture between NCEA and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as Trustee. NCEA is a joint powers authority organized and existing pursuant to the laws of the State of California (the "State") with the power to issue the Bonds and enter into the transaction described herein. Capitalized terms used on this cover page and not otherwise defined have the meanings set forth in this Official Statement.

The Bonds will be issued in authorized denominations of \$5,000 or any integral multiple thereof in book-entry form through The Depository Trust Company ("DTC"). The principal, Redemption Price and Purchase Price of and interest on the Bonds are payable by the Trustee. Purchasers of the Bonds will not receive physical delivery of bond certificates.

From their Initial Issue Date to and including _____, 20__* (the "Interest Rate Reset Period"), the Bonds will bear interest in a Fixed Rate Period, as shown on the inside cover page and as described herein. During the Interest Rate Reset Period, interest on the Bonds is payable semiannually on each [January 1] and [July 1], commencing _____, 20__*. The Bonds are subject to optional and extraordinary mandatory redemption during the Interest Rate Reset Period, and the Bonds maturing on _____, 20__* are subject to mandatory tender for purchase on _____, 20__* (the "Mandatory Purchase Date").

The proceeds of the Bonds will be used to (a) refund all of NCEA's Commodity Supply Revenue Bonds, Series 2018 (the "2018 Bonds"), (b) pay the cost of acquisition of additional quantities of natural gas and electricity (the "Commodities") to be delivered under the Commodity Project, (c) fund commodity swap and debt service reserves and (d) pay costs of issuance of the Bonds (the "Commodity Project"). NCEA and Aron Energy Prepay 33 LLC, a Delaware limited liability company (the "Commodity Supplier") have entered into an Amended & Restated Prepaid Commodity Sales Agreement (the "Commodity Purchase Agreement") with respect to the Commodity Project. NCEA has sold all of the Commodities acquired under the Commodity Purchase Agreement to Sacramento Municipal Utility District (the "Project Participant") under the Commodity Supply Contract. Pursuant to the Commodity Purchase Agreement, the Commodity Supplier is obligated to deliver specified daily quantities of Commodities, make payments for any Commodities not delivered, remarket Commodities not taken by the Project Participant and pay a Termination Payment on any Early Termination Payment Date established under the Commodity Purchase Agreement. Any such payment will be applied to the mandatory redemption of all of the Bonds.

The Commodity Supplier will deposit a specified amount from the prepayment it receives from NCEA under a [_____] Agreement (the "Funding Agreement") with [_____] (the "Funding Recipient"), and will enter into a Commodity Purchase, Sale and Service Agreement (the "Commodity Sale and Service Agreement") with J. Aron & Company LLC ("J. Aron"). Under the Commodity Sale and Service Agreement, J. Aron will sell Commodities to the Commodity Supplier in the quantities and at the delivery points necessary for the Commodity Supplier to meet its obligations to NCEA under the Commodity Purchase Agreement and for NCEA to meet its obligations to the Project Participant under the Commodity Supply Contract. The monthly payments made by the Funding Recipient under the Funding Agreement will provide amounts sufficient to enable the Commodity Supplier to meet its payment obligations under the Commodity Sale and Service Agreement and the Commodity Supplier Commodity Swap.

THE BONDS DO NOT CONSTITUTE A DEBT OR LIABILITY OF THE STATE OF CALIFORNIA, ANY POLITICAL SUBDIVISION THEREOF (OTHER THAN NCEA), OR THE PROJECT PARTICIPANT, BUT SHALL BE PAYABLE SOLELY FROM THE FUNDS PROVIDED THEREFOR UNDER THE INDENTURE. NCEA SHALL NOT BE OBLIGATED TO PAY THE PRINCIPAL OR REDEMPTION PRICE OF OR INTEREST ON THE BONDS, EXCEPT FROM THE FUNDS PROVIDED THEREFOR UNDER THE INDENTURE AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OF CALIFORNIA OR OF ANY POLITICAL SUBDIVISION THEREOF, INCLUDING NCEA, OR OF THE PROJECT PARTICIPANT IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OR REDEMPTION PRICE OF AND INTEREST ON THE BONDS. THE ISSUANCE OF THE BONDS SHALL NOT DIRECTLY OR INDIRECTLY OR CONTINGENTLY OBLIGATE THE STATE OF CALIFORNIA OR ANY POLITICAL SUBDIVISION THEREOF (INCLUDING THE PROJECT PARTICIPANT) TO LEVY OR TO PLEDGE ANY FORM OF TAXATION OR TO MAKE ANY APPROPRIATION FOR THEIR PAYMENT. NCEA HAS NO TAXING POWER.

This Official Statement describes the Bonds only during the Interest Rate Reset Period and must not be relied upon if the Bonds are converted to any other interest rate period. The purchase and ownership of the Bonds involve investment risk and may not be suitable for all investors. This cover page is not intended to be a summary of the terms of or the security for the Bonds. Investors are advised to read this Official Statement in its entirety to obtain information essential to the making of an informed investment decision with respect to the Bonds, giving particular attention to the matters discussed under "INVESTMENT CONSIDERATIONS AND RISKS" herein.

The Bonds are offered, when, as and if issued by NCEA and accepted by the Underwriter, subject to the approval of validity by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to NCEA, and certain other conditions. Certain legal matters will be passed upon for NCEA by its General Counsel; for the Commodity Supplier by Sheppard, Mullin, Richter & Hampton LLP; for the Funding Recipient by [____]; and for the Underwriter by Chapman and Cutler LLP. It is expected that the Bonds will be available for delivery through the facilities of DTC on or about _____, 2024.

PFM Financial Advisors LLC, has acted as financial advisor to NCEA in connection with the Bonds.

Goldman Sachs & Co. LLC

_____, 2024

* Preliminary; subject to change.

\$000,000,000*
NORTHERN CALIFORNIA ENERGY AUTHORITY
COMMODITY SUPPLY REVENUE REFUNDING BONDS, SERIES 2024

MATURITY DATES, PRINCIPAL AMOUNTS, INTEREST RATES, YIELDS AND CUSIPS

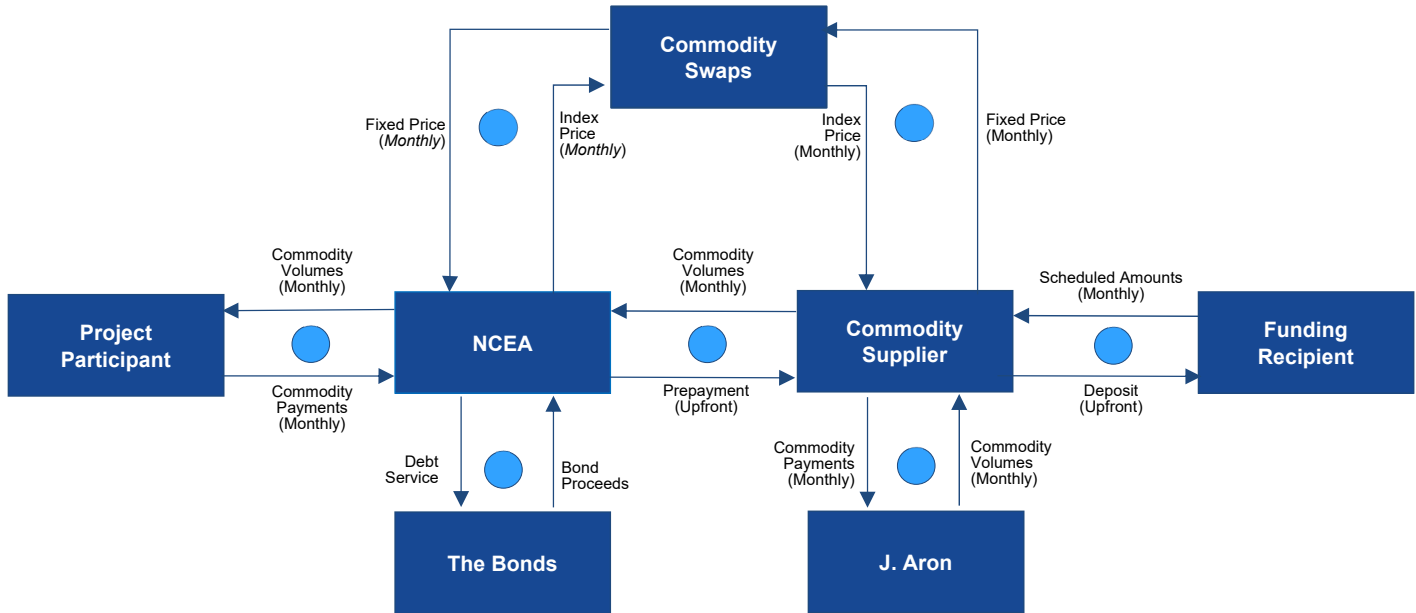
MATURITY ([_____])	PRINCIPAL AMOUNT	INTEREST RATE	YIELD	CUSIP ⁽¹⁾
	\$	%	%	664840__
				664840__
				664840__
				664840__
				664840__
<p>\$ _____ % Term Bond due _____, 20__⁽²⁾, Yield: _____%⁽³⁾ CUSIP⁽¹⁾ 664840__</p>				

* Preliminary, subject to change.

(1) CUSIP® is a registered trademark of the American Bankers Association. The CUSIP numbers listed above have been provided by CUSIP Global Services, managed on behalf of the American Bankers Association by FactSet Research Systems Inc., and are included solely for the convenience of bondholders. NCEA and the Underwriter make no representation with respect to such numbers or undertake any responsibility for their accuracy. The CUSIP numbers are subject to being changed after the issuance of the Bonds as a result of various subsequent actions including, but not limited to a refunding in whole or in part of the Bonds.

(2) The Bonds maturing on _____, 20__* are required to be tendered for purchase on _____, 20__*.

**NORTHERN CALIFORNIA ENERGY AUTHORITY
COMMODITY SUPPLY REVENUE REFUNDING BONDS, SERIES 2024
PREPAID COMMODITY STRUCTURE**



1. **Bond Issuance:** The Northern California Energy Authority (“NCEA”) will issue the Bonds to refund the 2018 Bonds, prepay for additional Commodity quantities, fund commodity swap and debt service reserves, and pay costs of issuance. The Bonds will bear interest at a fixed interest rate during the Interest Rate Reset Period.
2. **Prepayment:** In 2018, NCEA issued the 2018 Bonds to finance a prepayment to J. Aron & Company LLC (“J. Aron”) for an approximately thirty-year supply of Commodities. Effective on the Initial Issue Date of the Bonds, J. Aron will transfer by novation its interests under the 2018 prepayment transaction to Aron Energy Prepay 33 LLC (the “Commodity Supplier”), and NCEA and the Commodity Supplier will enter into the Amended & Restated Prepaid Commodity Sales Agreement (the “Commodity Purchase Agreement”). Under the Commodity Purchase Agreement, NCEA will prepay for additional Commodity quantities and the Commodity Supplier will be obligated to (a) deliver specified daily quantities of gas each month to NCEA during the Gas Delivery Period and specified hourly quantities of electricity during the Electricity Delivery Period; (b) make payments for any Commodities not delivered or taken based on replacement cost or the market price, whichever is higher; and (c) make a Termination Payment upon a Termination Payment Event, as described herein.
3. **Funding Agreement:** The Commodity Supplier and [] (the “Funding Recipient”), will enter into a _____ Agreement (the “Funding Agreement”) pursuant to which the Commodity Supplier will [loan/deposit] a specified amount to the Funding Recipient and the Funding Recipient will be obligated to pay Scheduled Withdrawal Amounts to the Commodity Supplier and certain other amounts upon any early termination of the Funding Agreement. The Scheduled Withdrawal Amounts payable under the Funding Agreement provide amounts sufficient to meet the Commodity Supplier’s monthly Commodity purchase obligations, net of receipts (payments) under the Commodity Supplier Commodity Swap. The Funding Agreement provides a fixed interest rate for a term equal to the Interest Rate Reset Period on the Bonds and will mature at the end of such Period.
4. **Commodity Supply:** The Commodity Supplier will purchase Commodities from J. Aron under a long-term Commodity Sale and Service Agreement per a prescribed schedule quantities and delivery points that matches the corresponding schedule under the Commodity Purchase Agreement. The Commodity Supplier will pay for the Commodities monthly in arrears. J. Aron’s payment obligations under the Commodity Sale and Service Agreement will be guaranteed by The Goldman Sachs Group, Inc. (“GSG”).
5. **Project Participant:** Under the Commodity Supply Contract (which has been in effect since 2018), NCEA will sell to Sacramento Municipal Utility District all of the natural gas delivered by the Commodity Supplier during the Gas Delivery Period, and all of the electricity delivered by the Commodity Supplier during the Electricity Delivery Period, in each case on a pay-as-you go basis and at the Contract Prices specified in the Commodity Supply Contract which include specified discounts. The amounts payable by the Project Participant will provide sufficient revenues (net of swap payments and receipts, and investment income from the Debt Service Account) to enable NCEA to make the required scheduled deposits to the Debt Service Account.
6. **Commodity Swaps:** During the Gas Delivery Period, NCEA will pay index and receive fixed amounts from the Commodity Swap Counterparty to ensure its payment obligations are index based while ensuring that sufficient fixed revenues are available to meet its fixed debt service obligations. The Commodity Supplier will enter into a mirror swap with the same Commodity Swap Counterparty to meet its requirements for market-referenced pricing to fulfill its delivery obligations.

The information contained in this Official Statement has been obtained from NCEA, the Project Participant, J. Aron, GSG, the Funding Recipient, the Commodity Swap Counterparty, DTC and other sources believed to be reliable. This Official Statement is submitted in connection with the sale of the securities described herein and may not be reproduced or used, in whole or in part, for any other purpose. This Official Statement speaks only as of its date and the information contained in this Official Statement is subject to change without notice and neither the delivery of this Official Statement nor any sale made by means of it shall, under any circumstances, create any implication that there have not been changes in the affairs of any party since the date of this Official Statement.

No broker, dealer, salesman or other person has been authorized to give any information or to make any representations other than those contained in this Official Statement in connection with the offering made hereby and, if given or made, such information or representations must not be relied upon as having been authorized by NCEA or the Underwriter. This Official Statement does not constitute an offer or solicitation in any jurisdiction in which such offer or solicitation is not authorized, or in which the person making such offer or solicitation is not qualified to do so or to any person to whom it is unlawful to make such offer or solicitation.

The Bonds will not be registered under the Securities Act of 1933, as amended, and will not be listed on any stock or other securities exchange. Neither the Securities and Exchange Commission nor any other federal, state, municipal or other government entity or agency has or will have passed upon the adequacy of this Official Statement or, except for NCEA, approved the Bonds for sale.

In making an investment decision, investors must rely on their own examination of the terms of the offering, including the merits and risks involved. These securities have not been recommended by any federal or state securities commission or regulatory authority. No commission or authority has confirmed the accuracy or determined the adequacy of this document.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITER MAY ENGAGE IN TRANSACTIONS THAT STABILIZE, MAINTAIN OR OTHERWISE AFFECT THE MARKET PRICES OF THE BONDS. SUCH TRANSACTIONS, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

The Underwriter has provided the following sentence for inclusion in this Official Statement: The Underwriter has reviewed the information in this Official Statement in accordance with, and as a part of, their responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriter does not guarantee the accuracy or completeness of such information.

References to web site addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such web sites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for purposes of, and as that term is defined in, Rule 15c2-12 of the United States Securities and Exchange Commission.

Certain statements included or incorporated by reference in this Official Statement constitute "forward-looking statements." Such statements are generally identifiable by the terminology used, such as "plan," "project," "expect," "anticipate," "intend," "believe," "estimate," "budget" or other similar words. The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements described to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. NCEA does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations or events, conditions or circumstances on which such statements are based occur.

NORTHERN CALIFORNIA ENERGY AUTHORITY
6201 S. Street
Sacramento, CA 95817

COMMISSION

[insert current members]

PROJECT PARTICIPANT

Sacramento Municipal Utility District, Sacramento, California

BOND COUNSEL

Orrick, Herrington & Sutcliffe LLP

TRUSTEE

Computershare Trust Company, N.A.

FINANCIAL ADVISER

PFM Financial Advisors LLC

VERIFICATION AGENT

Samuel Klein and Company

TABLE OF CONTENTS

INTRODUCTION	1	Remarketing Election	45
Northern California Energy Authority	1	Replacement of Funding Agreement	45
The Project Participant	1	THE COMMODITY SALE AND SERVICE AGREEMENT	46
The Commodity Project	1	General	46
Plan of Refunding	2	J. Aron as Agent	46
The Bonds	3	Failure to Deliver or Receive Commodities	47
Security for the Bonds	3	Payment Provisions	47
The Commodity Purchase Agreement	3	Force Majeure	47
The Funding Agreement	6	Ledger Event Payments	48
The Commodity Sale and Service Agreement	6	Assignment	48
The Commodity Supply Contract	7	Defaults and Termination Events	48
The Commodity Swaps	8	Remedies and Termination	49
Debt Service and Commodity Swap Reserves	9	Security	49
Receivables Purchase Provisions	10	GSG, J. ARON AND THE COMMODITY SUPPLIER	50
Re-Pricing Agreement	10	GSG	50
The Commodity Supplier, J. Aron and GSG	11	J. Aron	50
Certain Relationships	11	The Commodity Supplier	51
INVESTMENT CONSIDERATIONS	12	THE FUNDING AGREEMENT	54
Special and Limited Obligations	12	THE COMMODITY SWAPS	54
Structure of the Commodity Project	13	General	54
Performance by Others	15	Form of Commodity Swaps	55
Commodity Remarketing	16	Payment	55
Limitations on Exercise of Remedies	17	Early Termination	56
Enforceability of Contracts	18	Custodial Agreement	57
No Established Trading Market	18	THE COMMODITY SWAP COUNTERPARTY	58
Loss of Tax Exemption	18	THE COMMODITY SUPPLY CONTRACT	58
SECURITY FOR THE BONDS	19	General	58
The Indenture	19	Pricing Provisions	59
Flow of Funds	21	Billing and Payment	59
Debt Service Account	22	Annual Refunds	60
Debt Service Reserve Account	22	Covenants of the Project Participant	60
Redemption Account	23	Transportation; Title and Risk of Loss	61
Commodity Swap Reserve Account	23	Failure to Perform	61
No Additional Bonds	23	Remarketing of Commodities	61
Amendment of Indenture	23	Force Majeure	62
Investment of Funds	23	Default and Remedies	63
Enforcement of Project Agreements	24	Assignment	64
ESTIMATED SOURCES AND USES OF FUNDS	27	Commodity Assignment Agreements	64
PLAN OF REFUNDING	27	NORTHERN CALIFORNIA ENERGY AUTHORITY	64
THE BONDS	28	General	65
General	28	Governance and Management	65
Interest	28	Limited Liability	65
Increased Interest Rate Upon Ledger Event	29	CERTAIN FACTORS AFFECTING NCEA AND THE PROJECT	
Tender	30	PARTICIPANT	65
Redemption	30	General	65
Book-Entry System	33	Disruptions in the Natural Gas Market	66
REVENUES AND DEBT SERVICE REQUIREMENTS	34	THE PROJECT PARTICIPANT	67
THE COMMODITY PURCHASE AGREEMENT	34	CONTINUING DISCLOSURE	67
Purchase and Sale	34	LITIGATION	68
Delivery of Gas	35	FINANCIAL STATEMENTS	68
Delivery of Electricity	35	FINANCIAL ADVISOR	68
Failure to Deliver or Receive Commodities	36	UNDERWRITING	68
Commodity Remarketing	36	CERTAIN RELATIONSHIPS	69
Ledger Event	37	RATING	69
Payment Provisions	39	TAX MATTERS	70
Force Majeure	39	APPROVAL OF LEGAL MATTERS	72
Assignment	39	MISCELLANEOUS	72
Funding Agreement	40		
Early Termination	40		
Replacement of Commodity Swaps	42		
Remedies and Termination Payment	43		
Receivables Purchase Provisions	44		
THE RE-PRICING AGREEMENT	45		
General	45		

APPENDIX A	—	AUDITED FINANCIAL STATEMENTS OF NCEA FOR FISCAL YEARS ENDED DECEMBER 31, 2022 AND 2021
APPENDIX B	—	INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT
APPENDIX C	—	DEFINITIONS OF CERTAIN TERMS
APPENDIX D	—	SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE
APPENDIX E	—	FORM OF CONTINUING DISCLOSURE AGREEMENT
APPENDIX F	—	PROPOSED FORM OF OPINION OF BOND COUNSEL
APPENDIX G	—	BOOK-ENTRY SYSTEM
APPENDIX H	—	REDEMPTION PRICE OF THE BONDS
APPENDIX I	—	SCHEDULE OF TERMINATION PAYMENT
APPENDIX J	—	THE FUNDING RECIPIENT

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OFFICIAL STATEMENT

\$000,000,000*

NORTHERN CALIFORNIA ENERGY AUTHORITY COMMODITY SUPPLY REVENUE REFUNDING BONDS, SERIES 2024

INTRODUCTION

This Official Statement, which includes the cover page and appendices attached hereto, contains information concerning (a) Northern California Energy Authority (“NCEA”), a joint powers authority organized under the laws of the State of California (the “State”), (b) NCEA’s Commodity Supply Revenue Refunding Bonds, Series 2024 (the “Bonds”), being issued in the aggregate principal amount of \$000,000,000* and (c) the Commodity Project (defined below) being financed with proceeds of the Bonds. Capitalized terms used herein have the meanings shown in APPENDIX C.

NORTHERN CALIFORNIA ENERGY AUTHORITY

The Northern California Energy Authority (“NCEA”) is a joint powers authority formed pursuant to Chapter 5 of Division 7 of Title 1 of the Government Code of the State of California, as amended and supplemented (the “Act”), by the Sacramento Municipal Utility District (“SMUD”) and the Sacramento Municipal Utility District Financing Authority (“SFA”). NCEA is authorized to undertake all actions permitted by the Act that are necessary or convenient to assist SMUD with the acquisition and financing of supplies of natural gas and electricity, including undertaking the Commodity Project and selling the Commodities from the Commodity Project to SMUD, as described herein. See “NORTHERN CALIFORNIA ENERGY AUTHORITY.”

THE PROJECT PARTICIPANT

SMUD operates the sixth largest community-owned electric utility system in the United States. SMUD’s electric system has provided retail electric service since 1946, and it currently serves a population of approximately 1.5 million persons in a 900 square mile service area that covers the principal parts of Sacramento County and small portions of Placer and Yolo counties. See APPENDIX B for additional information regarding SMUD.

THE COMMODITY PROJECT

NCEA previously issued its Commodity Supply Revenue Bonds, Series 2018 (the “2018 Bonds”), pursuant to a Trust Indenture (the “2018 Indenture”) between NCEA and Wells Fargo Bank, National Association, as trustee, to finance the acquisition of an approximately thirty-year supply of natural gas and electricity (together, the “Commodities”) under a Prepaid Commodity Sales Agreement (the “2018 Commodity Purchase Agreement”) with J. Aron & Company LLC, a New York limited liability company (“J. Aron”). Deliveries of natural gas under the 2018 Commodity Purchase Agreement began on June 1, 2019. NCEA entered

* Preliminary, subject to change.

into a Commodity Supply Contract (the “2018 Commodity Supply Contract”) with the Project Participant for the sale of all of the Commodities to be delivered under the 2018 Commodity Purchase Agreement.

The 2018 Bonds mature and are subject to mandatory tender for purchase on July 1, 2024, and a portion of the proceeds of the Bonds will be used to current refund the 2018 Bonds. See “PLAN OF REFUNDING.” Effective as of the Initial Issue Date of the Bonds: (a) J. Aron will transfer by novation all of its interests under the 2018 Commodity Purchase Agreement and its other contracts and agreements related to the 2018 prepayment transaction to Aron Energy Prepay 33 LLC, a Delaware limited liability company (the “Commodity Supplier”); (b) in consideration of a lump sum payment for its acceptance of the obligations under the 2018 Commodity Purchase Agreement and such other contracts and agreements, the Commodity Supplier will accept such transfer by novation from J. Aron; (c) NCEA and the Commodity Supplier will enter into an Amended & Restated Prepaid Commodity Sales Agreement (the “Commodity Purchase Agreement”), together with amendments and restatements of various other contracts and agreements entered into in connection with the 2018 prepayment transaction; (d) NCEA will make a prepayment to the Commodity Supplier under the Commodity Purchase Agreement for additional quantities of Commodities to be delivered through September 2054; and (e) NCEA and the Project Participant will enter into an Amended & Restated Commodity Supply Contract (as so amended and restated, the “Commodity Supply Contract”) to provide for the purchase and sale of additional quantities of Commodities through September 2054.

Under the Commodity Purchase Agreement, the Commodity Supplier will continue to deliver natural gas until NCEA exercises its option to switch from gas deliveries to electricity deliveries (the “Gas Delivery Period”). The switch from gas deliveries to electricity deliveries will occur on a date (the “Switch Date”) determined pursuant to the Commodity Purchase Agreement, but may not occur prior to June 1, 2028. Scheduled deliveries of electricity under the Commodity Purchase Agreement will commence on the Switch Date and will continue to the end of the delivery period under the Commodity Purchase Agreement (the “Electricity Delivery Period”). The “Commodity Project” consists of NCEA’s purchase of natural gas and electricity pursuant to the Commodity Purchase Agreement and all of its related contractual arrangements and agreements. See “THE COMMODITY PURCHASE AGREEMENT.”

The Project Participant uses the natural gas that is now being delivered during the Gas Delivery Period as fuel for the generation of electricity that is distributed and sold to retail customers within its service area. If the Switch Date occurs, the Project Participant will distribute and sell the electricity that will be delivered during the Electricity Delivery Period to retail customers within its service area. See “THE COMMODITY SUPPLY CONTRACT.”

PLAN OF REFUNDING

Proceeds of the Bonds together with other available moneys will be deposited with Computershare Trust Company, N.A., as escrow agent (the “Escrow Agent”), pursuant to an Escrow Agreement to establish an irrevocable trust escrow account (the “Escrow Account”), consisting of cash and noncallable direct full faith and credit obligations of the United States of America. The amounts in the Escrow Account will be used to refund the \$537,295,000 principal amount of 2018 Bonds maturing on and after July 1, 2024 (the “Refunded Bonds”), and are pledged solely for the payment of the Refunded Bonds. Upon the deposit of such amounts and satisfaction of certain requirements of the 2018 Indenture, the Refunded Bonds will be deemed to be paid and will no longer be secured by the pledge of the Trust Estate under the 2018 Indenture. The Refunded Bonds will be called for redemption on July 1, 2024. See “PLAN OF REFUNDING” below.

THE BONDS

From their Initial Issue Date to and including _____, 20__ (the “*Interest Rate Reset Period*”), the Bonds will bear interest in a Fixed Rate Period, with interest payable semiannually on each [January 1] and [July 1], commencing _____, 20__*, as described herein.

The Bonds are subject to optional redemption and extraordinary mandatory redemption during the Interest Rate Reset Period, and the Bonds maturing on _____, 20__* are required to be tendered for purchase on _____, 20__* (the “*Mandatory Purchase Date*”), which is the day following the end of the Interest Rate Reset Period. The Purchase Price of Bonds on the Mandatory Purchase Date is equal to the principal amount thereof plus accrued interest. See “THE BONDS—Redemption” and “—Tender—*Mandatory Tender*.” Under the Indenture, a “Failed Remarketing” will occur upon the failure (a) of the Trustee to receive the Purchase Price of any Bond required to be purchased or redeemed on a Mandatory Purchase Date by 12:00 noon, New York City time, on the fifth Business Day preceding such Mandatory Purchase Date or (b) to purchase or redeem such Bond in whole by such Mandatory Purchase Date. A Failed Remarketing will result in early termination of the Commodity Purchase Agreement and the extraordinary redemption of the Bonds on the Mandatory Purchase Date. See “THE BONDS —Redemption” and “—Tender.”

SECURITY FOR THE BONDS

The Bonds are issued pursuant to the authority contained in the Act, and are issued and secured under an Amended and Restated Trust Indenture, dated as of the first day of the month in which the Bonds are issued (the “*Indenture*”), between NCEA and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as trustee (the “*Trustee*”). The Bonds are special and limited obligations of NCEA, are payable solely from and secured solely by the Trust Estate pledged by the Indenture, and are expected to be paid from the Revenues of the Commodity Project. See “SECURITY FOR THE BONDS.”

THE COMMODITY PURCHASE AGREEMENT

Delivery of Commodities. Pursuant to the terms and conditions and subject to the limitations set forth in the Commodity Purchase Agreement:

- (a) on each gas day during the Gas Delivery Period, the Commodity Supplier agrees to deliver and NCEA agrees to take, in each case on a firm basis, the Contract Quantity of gas;
- (b) during each hour during the Electricity Delivery Period, the Commodity Supplier agrees to deliver and NCEA agrees to take, in each case on a firm basis, the Contract Quantity of electricity; and
- (c) during each Month of the Electricity Delivery Period, the Commodity Supplier agrees to deliver and NCEA agrees to purchase and take, the Assigned Prepay Quantity of electricity, if any.

“*Contract Quantity*” is defined in the Commodity Purchase Agreement to mean: (a) during the Gas Delivery Period for each gas day and each gas delivery point, the daily quantity of gas (in MMBtu) specified for such

* Preliminary, subject to change.

delivery point for the Month in which such gas day occurs; and (b) during the Electricity Delivery Period, (i) the specified Hourly Quantity of electricity for each hour and each electricity delivery point and (ii) the Assigned Prepay Quantity, if any, of Assigned Electricity for each Month. The delivery points designated in the Commodity Purchase Agreement are located on the natural gas pipelines and electricity transmission lines that serve the Project Participant.

Switch Date. On June 1, 2028 or such later date as may be established pursuant to the Commodity Purchase Agreement (the “*Switch Date*”), deliveries of gas under the Commodity Purchase Agreement will cease, and the Electricity Delivery Period and deliveries of electricity will commence.

Assigned Electricity. From and after the Switch Date, the Project Participant may enter into assignment agreements (“*PPA Assignment Agreements*”) to assign a portion of its rights and obligations (the “*Assigned Rights and Obligations*”) under power purchase agreements (“*Assigned PPAs*”) to J. Aron. If such assignments are accepted by J. Aron, the electricity delivered under the Assigned PPAs (the “*Assigned Electricity*”) will be delivered to J. Aron for sale to the Commodity Supplier under the Commodity Sale and Service Agreement. The monthly quantities of Assigned Electricity that are allocated to the prepayment transaction pursuant to the procedures set forth in the Commodity Supply Contract (the “*Assigned Prepay Quantities*”) will offset (on an equivalent value basis), and will be used to meet, the Commodity Supplier’s obligations to deliver the Hourly Quantity of electricity to NCEA under the Commodity Purchase Agreement. NCEA will then deliver such the Assigned Prepaid Quantities to the Project Participant under the Commodity Supply Contract.

Commodity Remarketing, Ledger Event and Additional Interest. Under the circumstances described in the Commodity Purchase Agreement and during the Gas Delivery Period, the Commodity Supplier agrees to remarket, on a daily or monthly basis, all or such portion of the Contract Quantity of gas as is designated by NCEA or the Trustee. In the event that the Commodity Supplier is unable to remarket any such gas, the Commodity Supplier has agreed to purchase such gas for its own account. During the Electricity Delivery Period, the Commodity Supplier further agrees to remarket or purchase all or such portion of the Hourly Quantity of electricity as is designated by NCEA or the Trustee, and may agree to remarket Assigned Electricity upon mutual agreement with NCEA.

Under the Commodity Sale and Service Agreement (described below), J. Aron has agreed to provide all Commodity remarketing services necessary for the Commodity Supplier to meet its obligations under the Commodity Purchase Agreement. These services include requirements to (a) enter all remarketing sales or purchases of Commodities on a ledger system that tracks compliance with the requirements of the U.S. Treasury Regulations applicable to tax-exempt bonds that finance prepaid natural gas and electricity supplies, and (b) exercise commercially reasonable efforts to remediate any non-complying sales (*i.e.*, non-qualified use sales and private business use sales) through “qualifying use” sales within two years.

In the event that any non-complying Commodities remarketing sales are not remediated within two years and exceed certain cumulative limits, a “Ledger Event” will occur, subject to certain provisions of the Commodity Purchase Agreement. If a Ledger Event occurs, and an Early Termination Payment Date has not been designated, J. Aron will be obligated to pay the Commodity Supplier, and the Commodity Supplier will be obligated to pay NCEA, scheduled amounts (the “*Ledger Event Payments*”) calculated to provide a sum sufficient (together with the interest component of the Scheduled Debt Service Deposits) to enable NCEA to pay interest on the Bonds at the Increased Interest Rate of 8.00% per annum. The Indenture provides that, subject to NCEA’s receipt of such Ledger Event Payments from the Commodity Supplier, interest on the Bonds will be

paid at the Increased Interest Rate after the occurrence of a Ledger Event. See “THE BONDS—Increased Interest Rate Upon Ledger Event,” “THE COMMODITY PURCHASE AGREEMENT—Commodity Remarketing” and “—Ledger Event,” and “THE COMMODITY SALE AND SERVICE AGREEMENT—J. Aron as Agent” and “—Ledger Event Payments.”

Commodity Delivery Termination Events. A Commodity Delivery Termination Date (a) will occur automatically under the Commodity Purchase Agreement upon the occurrence of certain events (“*Automatic Commodity Delivery Termination Events*”), and (b) may be designated at the option of the Commodity Supplier upon the occurrence of a Ledger Event and certain other events (“*Optional Commodity Delivery Termination Events*”). Certain of these Commodity Delivery Termination Events also constitute Termination Payment Events under the Commodity Purchase Agreement as described below.

If a Commodity Delivery Termination Date occurs, the Delivery Period for Commodities under the Commodity Purchase Agreement will end and the Commodity Supplier will be required:

(a) in the case of a Commodity Delivery Termination Event that is a Termination Payment Event, to pay a scheduled termination payment (the “*Termination Payment*”) to the Trustee on the last Business Day of the Month following the Month in which the Termination Payment Event or, in the case of a Termination Payment Event due to a Failed Remarketing, on the last Business Day of the then-current Interest Rate Period (in either case, the “*Early Termination Payment Date*”); or

(b) in the case of a Commodity Delivery Termination Date that is not a Termination Payment Event, to pay scheduled monthly amounts to NCEA until the earlier of (i) the Month in which a Termination Payment Event occurs or (ii) the last due date for such scheduled payments.

Termination Payment Events. The Commodity Delivery Termination Events that constitute a Termination Payment Event are described under the caption “THE COMMODITY PURCHASE AGREEMENT—Early Termination” below, and include: (a) a failure of the Commodity Supplier to pay any amounts owed to NCEA under the Commodity Purchase Agreement because of a failure by [] (the “*Funding Recipient*”) to pay when due any amounts owed to the Commodity Supplier pursuant to the Funding Agreement (defined below) and such failure continues for 30 days after receipt by the Commodity Supplier and the Funding Recipient of notice thereof from NCEA; and (b) [exercise of Funding Recipient/Commodity Supplier Acceleration Option(s)].

If an Early Termination Payment Date occurs, the Bonds will be subject to extraordinary mandatory redemption in whole on the first day of the following Month. The amount of the Termination Payment declines over time as the Commodity Supplier performs its Commodities delivery obligations under the Commodity Purchase Agreement. The amount of the Termination Payment, together with the amounts required to be on deposit in certain Funds and Accounts held by the Trustee, has been calculated to provide a sum at least sufficient to pay the Redemption Price of the Bonds, assuming that the Commodity Supplier, the Funding Recipient, the Investment Agreement Providers and the Project Participant pay and perform their respective contract obligations when due. A performance shortfall from any one of these entities could result in a payment shortfall to Bondholders.

If a Commodity Delivery Termination Date occurs that is not a Termination Payment Event, an Early Termination Payment Date will not occur under the Commodity Purchase Agreement until the earlier of (a) the

occurrence of a Termination Payment Event or (b) the end of the Interest Rate Reset Period. In the event that the Funding Recipient does not exercise its option to prepay the Final Payment Amount, the scheduled monthly amounts required to be paid by the Commodity Supplier will be applied to make the debt service payments on the Bonds. *The use of these scheduled payments (in lieu of payments made by the Project Participant under the Commodity Supply Contract) to make debt service payments could, under certain circumstances, adversely affect the continued tax-exempt status of the Bonds.* See “INVESTMENT CONSIDERATIONS—Loss of Tax Exemption on the Bonds.”

See “THE COMMODITY PURCHASE AGREEMENT” and “THE BONDS—Redemption—*Extraordinary Mandatory Redemption.*” A schedule of the Termination Payment as of specified Early Termination Payment Dates under the Commodity Purchase Agreement during the Interest Rate Reset Period is attached as APPENDIX I.

THE FUNDING AGREEMENT

[to be revised/conformed]

The Commodity Supplier will use proceeds from the prepayment it receives from NCEA to purchase a _____ Funding Agreement (the “*Funding Agreement*”) from the Funding Recipient. Such amount will be deposited into the “Funding Account” established under the Funding Agreement and will earn a fixed rate of interest. The Funding Agreement will mature by its terms on the Business Day preceding the Mandatory Purchase Date of the Bonds (the “*Maturity Date*”) unless terminated earlier. The Funding Agreement provides for monthly withdrawals of scheduled amounts (the “*Scheduled Withdrawals*”) from the Funding Account, including a final Scheduled Withdrawal of the unamortized balance of the Funding Account on the Maturity Date or any earlier termination date of the Funding Agreement. For a summary of certain provisions of the Funding Agreement, see “THE FUNDING AGREEMENT.” For certain information regarding [_____], see APPENDIX J.

The monthly Scheduled Withdrawals provide amounts sufficient to enable the Commodity Supplier to meet its payment obligations (other than those in respect of the Receivables Purchase Provisions) under the Commodity Purchase Agreement, the Commodity Sale and Service Agreement and the Commodity Supplier Commodity Swaps.

The ability of the Commodity Supplier to meet its obligations under the Commodity Purchase Agreement, the Commodity Sale and Service Agreement and the Commodity Supplier Commodity Swap will directly and materially depend upon full and timely performance by the Funding Recipient under the Funding Agreement. Any failure by the Funding Recipient to timely pay the Scheduled Withdrawals or the Final Payment Amount when due under the Funding Agreement will result in an inability of the Commodity Supplier to meet its contract obligations to NCEA and a shortfall in the amounts necessary for NCEA to pay the principal, interest, Redemption Price and purchase price due on the Bonds. The Funding Agreement is an unsecured obligation of the Funding Recipient. See “INVESTMENT CONSIDERATIONS—Performance by Others.”

THE COMMODITY SALE AND SERVICE AGREEMENT

Under a Commodity Purchase, Sale and Service Agreement (the “*Commodity Sale and Service Agreement*”) between J. Aron and the Commodity Supplier, J. Aron has agreed to sell Commodities to the

Commodity Supplier on a pay-as-you-go basis in the quantities and at the delivery points necessary to enable the Commodity Supplier to meet its commodity delivery obligations under the Commodity Purchase Agreement. J. Aron is obligated to make payments to the Commodity Supplier for Commodities not delivered or taken under the Commodity Sale and Service Agreement for any reason, including force majeure events. J. Aron has also agreed to remarket Commodities and make payments to the Commodity Supplier that enable it to meet its obligations under the Commodity Purchase Agreement. J. Aron is appointed as the Commodity Supplier's agent for taking all actions that the Commodity Supplier is required or permitted to take under the Commodity Purchase Agreement, the Commodity Supplier Commodity Swap, the Re-Pricing Agreement and, with respect to ordinary course transactions, the Commodity Sale and Service Agreement. J. Aron's commodity delivery, payment, remarketing and receivables purchase obligations under the Commodity Sale and Service Agreement mirror the Commodity Supplier's obligations under the Commodity Purchase Agreement. The Commodity Supplier may net any amounts due and owing to it by J. Aron against its monthly payments to J. Aron, but J. Aron is not entitled to net any amounts due and owing to it against its monthly payments to the Commodity Supplier.

The payment obligations of J. Aron to the Commodity Supplier under the Commodity Sale and Service Agreement are unconditionally guaranteed by GSG. See "THE COMMODITY SALE AND SERVICE AGREEMENT."

THE COMMODITY SUPPLY CONTRACT

Gas deliveries began under the 2018 Commodity Supply Contract on June 1, 2019. The Commodity Supply Contract provides for the sale to the Project Participant, on a pay-as-you-go basis, of all of the Commodities to be delivered to NCEA over the term of the Commodity Purchase Agreement. Under the Commodity Supply Contract, NCEA has agreed to deliver, and the Project Participant has agreed to purchase, the specified Contract Quantities of gas at designated delivery points during the Gas Delivery Period and the specified Hourly Quantities of electricity at designated delivery points during the Electricity Delivery Period. The Project Participant is obligated to pay NCEA for the quantities of Commodities delivered under the Commodity Supply Contract, including contracted quantities tendered for delivery by NCEA but not taken by the Project Participant (for which the Project Participant is eligible to receive a credit based on revenues received for the remarketed Commodities under certain circumstances described in such Commodity Supply Contract). The Project Participant has no obligation to pay for Commodities that NCEA fails to deliver. The Commodities sold under the Commodity Supply Contract are priced at the applicable "Contract Price," which (a) in the case of the Contract Quantity of gas, is the applicable monthly market index price for the gas delivery point plus any applicable delivery point premium and (b) in the case of the Hourly Quantity of electricity, is the day-ahead market price for the electricity deliver point, in each case *less* a specified discount.

In addition to the provisions with respect to Assigned PPAs described above (see "The Commodity Purchase Agreement—*Assigned Electricity*"), the Commodity Supply Contract includes provisions that enable the Project Participant to enter into assignment agreements ("*Gas Assignment Agreements*") to assign upstream gas supply contracts ("*Upstream Supply Contracts*") to J. Aron during the Gas Delivery Period. If such assignments are accepted by J. Aron, the assigned quantities of gas (the "*Assigned Gas Quantities*") under the Upstream Supply Contracts will be delivered to J. Aron for sale to the Commodity Supplier under the Commodity Sale and Service Agreement, and will be used to meet the Commodity Supplier's obligations to deliver the Contract Quantity of gas to NCEA under the Commodity Purchase Agreement. The Commodity Purchase Agreement, the Commodity Sale and Service Agreement and the Commodity Swaps contain various provisions and adjustments that accommodate the assignment of Upstream Supply Contracts and Assigned PPAs.

Payments made by the Project Participant under the Commodity Supply Contract are paid to NCEA for deposit into the Revenue Fund. The required payments under the Commodity Supply Contract, together with any net amounts received by NCEA under the NCEA Commodity Swap described below, constitute the primary and expected sources of the revenues pledged to the payment of the Bonds. The obligations of the Project Participant under the Commodity Supply Contract are payable solely from the revenues of its electric system. Under the Commodity Supply Contract, the Project Participant makes payments directly to the Trustee for deposit into the Revenue Fund. See “THE COMMODITY SUPPLY CONTRACT.”

THE COMMODITY SWAPS

Upon the execution of the 2018 Commodity Purchase Agreement, NCEA and J. Aron entered into commodity price swap agreements with RBC Europe Limited (“*RBCEL*”), as commodity swap counterparty. Under these swap agreements and during the Gas Delivery Period under the 2018 Commodity Purchase Agreement: (a) NCEA pays an index (floating) natural gas price and receives a fixed natural gas price for notional quantities of natural gas at delivery points that correspond to the quantities and related delivery points of natural gas under the 2018 Commodity Purchase Agreement; and (b) J. Aron pays a fixed natural gas price and receives a floating natural gas price at the same pricing points for the same notional quantities, also corresponding to the quantities and related delivery points under the 2018 Commodity Purchase Agreement.

Effective as of the Initial Issue Date:

(a) NCEA’s 2018 swap agreement will be amended and restated to (i) replace *RBCEL* with Royal Bank of Canada (“*Royal Bank*”) as the Commodity Swap Counterparty (by novation), and (ii) include notional quantities of natural gas with respect to the additional quantities of gas to be delivered under the Commodity Purchase Agreement (as so novated, amended and restated, the “*NCEA Commodity Swap*”);

(b) J. Aron will novate and transfer all of its interests under its 2018 swap agreement to the Commodity Supplier and such 2018 swap agreement will be amended and restated to (i) replace *RBCEL* with Royal Bank as the Commodity Swap Counterparty (by novation), and (ii) include notional quantities of natural gas with respect to the additional quantities of gas to be delivered under the Commodity Purchase Agreement (as so novated, amended and restated, the “*Commodity Supplier Commodity Swap*”); and

(c) The Commodity Supplier will enter into a Custodial Agreement with the Commodity Swap Counterparty and Computershare Trust Company, N.A., as Trustee and as custodian (in such capacity, the “*Custodian*”), to administer payments under the Commodity Supplier Commodity Swap. NCEA will enter into a Custodial Agreement (the “*NCEA Custodial Agreement*” and, together with the Commodity Supplier Custodial Agreement, the “*Custodial Agreements*”), with the Commodity Swap Counterparty, the Trustee and the Custodian, to administer payments under the NCEA Commodity Swap. See “THE COMMODITY SWAPS—Custodial Agreement.”

During the Gas Delivery Period under the Commodity Purchase Agreement: (a) under the NCEA Commodity Swap, NCEA pays a floating price to Royal Bank and receives a fixed price from Royal Bank for notional quantities that correspond to the Contract Quantity of gas and pricing points under the Commodity Purchase Agreement; and (b) under the Commodity Supplier Commodity Swap, the Commodity Supplier pays

a fixed price to Royal Bank and receives floating price from Royal Bank for the same notional quantities at the same pricing points. During the Electricity Delivery Period under the Commodity Purchase Agreement: (a) under the NCEA Commodity Swap, NCEA pays a floating price based on the day-ahead market price of electricity to Royal Bank and receives a fixed price from Royal Bank for notional quantities that correspond to the Hourly Quantity of electricity and pricing points under the Commodity Purchase Agreement; and (b) under the Commodity Supplier Commodity Swap, the Commodity Supplier pays a fixed price to Royal Bank and receives floating price from Royal Bank for the same notional quantities at the same pricing points. The notional quantities under the Commodity Swaps will be reduced to the extent of gas quantities delivered under fixed price Upstream Supply Contracts during the Gas Delivery Period and to the extent of electricity deliveries under fixed price Assigned PPAs during the Electricity Delivery Period.

The NCEA Commodity Swap and the Commodity Supplier Commodity Swap (together, the “*Commodity Swaps*”) have rolling two-month terms that renew automatically upon the payment due date of each monthly net settlement amount due thereunder through the term of the Delivery Period under the Commodity Purchase Agreement, unless an early termination date occurs under the Commodity Swaps. Each of the Commodity Swaps is subject to early termination upon the occurrence of certain events as described herein, including upon a Commodity Delivery Termination Date under the Commodity Purchase Agreement. See “THE COMMODITY SWAPS” and “THE COMMODITY SWAP COUNTERPARTY.”

DEBT SERVICE AND COMMODITY SWAP RESERVES

The Indenture establishes funding requirements for various funds and accounts, including the Debt Service Account, the Debt Service Reserve Account and the Commodity Swap Reserve Account. Scheduled Debt Service Deposits are required to be made monthly into the Debt Service Account in amounts equal to the accrued debt service on the Bonds. It is expected that the Debt Service Account, the Debt Service Reserve Account and the Commodity Swap Reserve Account will be invested pursuant to the Investment Agreements described herein. The providers of the Investment Agreements (the “*Investment Agreement Providers*”) are required to meet certain qualifications specified in the Indenture and will be selected on the date of Bond pricing pursuant to a competitive bidding process. See “SECURITY FOR THE BONDS—Investment of Funds.”

The Debt Service Reserve Account and the Commodity Swap Reserve Account provide reserves for debt service deposits and payments under the NCEA Commodity Swap in the event of payment defaults by the Project Participant under the Commodity Supply Contract. The Debt Service Reserve Requirement is \$ _____*, which approximately equals the maximum monthly Scheduled Debt Service Deposit during the Interest Rate Reset Period. The Minimum Amount required to be on deposit in the Commodity Swap Reserve Account is approximately \$ _____*. The Debt Service Reserve Requirement and the Minimum Amount are sufficient to cover payment defaults by the Project Participant for two months of maximum natural gas deliveries during the Interest Rate Reset Period at a monthly market gas index price of approximately \$ ____/MMBtu*. The monthly market index prices of the gas for delivery under the Commodity Supply Contract in the month of [_____] is \$ ____/MMBtu.

* Preliminary; subject to change.

* Preliminary; subject to change.

RECEIVABLES PURCHASE PROVISIONS

Swap Call Receivables. If a payment default by the Project Participant results in a deficiency of the funds necessary to pay amounts due under the NCEA Commodity Swap (a “*Swap Payment Deficiency*”), the Commodity Supplier has the option under the Receivables Purchase Provisions to purchase from the Trustee the rights to payment of net amounts owed by the Project Participant under the Commodity Supply Contract (“*Swap Call Receivables*”) in an amount sufficient to fund the Swap Payment Deficiency. The failure of the Commodity Supplier to exercise its option to purchase Swap Call Receivables is an Automatic Commodity Delivery Termination Event under the Commodity Purchase Agreement. See “THE COMMODITY PURCHASE AGREEMENT—Receivables Purchase Provisions.”

Elective Call Receivables. If the Project Participant defaults on its obligation to make any payment under its Commodity Supply Contract and such payment default does not result in a Swap Payment Deficiency, the Commodity Supplier has the option under the Receivables Purchase Provisions to purchase from the Trustee the receivables relating to such payment default (the “*Elective Call Receivables*” and, together with the Swap Call Receivables, “*Call Receivables*”). The Commodity Supplier may elect, in its discretion, to purchase the Elective Call Receivables at any time. The failure of the Commodity Supplier to not make such election does **not** constitute an Automatic Commodity Delivery Termination Event under the Commodity Purchase Agreement. See “THE COMMODITY PURCHASE AGREEMENT — Receivables Purchase Provisions” herein.

Purchase by J. Aron. Under the Commodity Sale and Service Agreement, J. Aron has agreed to purchase all Call Receivables purchased by the Commodity Supplier under the Receivables Purchase Provisions, provided that such obligation is subject to J. Aron having consented to the purchase of such Call Receivables by the Commodity Supplier. See “THE COMMODITY SALE AND SERVICE AGREEMENT.”

RE-PRICING AGREEMENT

On the Initial Issue Date of the Bonds, NCEA and the Commodity Supplier will enter into an Amended and Restated Re-Pricing Agreement (the “*Re-Pricing Agreement*”), which provides for (a) the determination of Commodity delivery periods (“*Reset Periods*”) subsequent to the Reset Period that corresponds to the Interest Rate Reset Period on the Bonds and (b) the calculation of the amount of the discount (in cents per MMBtu or in dollars per MWh, as applicable) from the Contract Price of the Commodities that is available (the “*Available Discount*”) for sales of Commodities to the Project Participant under the Commodity Supply Contract during each Reset Period.

The Reset Period that corresponds to the Interest Rate Reset Period on the Bonds begins on _____ and ends on the last day of _____, and the next Reset Period is expected to begin on _____. In the event that the Available Discount for any Reset Period is less than the minimum discount specified in the Commodity Supply Contract (which includes both monthly discounts and any annual refunds), the Project Participant may elect not to take Commodities during the Reset Period and to have the Commodities remarketed for the duration of the Reset Period (a “*Remarketing Election*”) by giving notice of such election to NCEA. Any Commodity that is covered by a Remarketing Election will be remarketed in accordance with the provisions of the Indenture and the Commodity Purchase Agreement. In the event that the Project Participant makes a Remarketing Election with respect to such Reset Period, J. Aron will have the right, but not the obligation, to designate a CSSA Early Termination Date under the Commodity Sale and Service Agreement, which designation is a Termination Payment Event under the Commodity Purchase Agreement. See “THE RE-

PRICING AGREEMENT” and “THE COMMODITY PURCHASE AGREEMENT — Commodity Remarketing” and “— Early Termination.” [NTD: See note on p. 48.]

THE COMMODITY SUPPLIER, J. ARON AND GSG

The Commodity Supplier is a Delaware limited liability company organized for the sole purpose of entering into the transactions on its part with respect to the Commodity Project described herein. J. Aron is the sole member of the Commodity Supplier, and will fund the Commodity Supplier with a cash equity contribution, an initial subordinated loan and a contingent subordinated loan that together equal to at least three percent of the outstanding (unamortized) amount of the prepayment under the Commodity Purchase Agreement (approximately \$[] million as of the Initial Issue Date).

J. Aron is wholly owned by GSG, and is engaged principally as a swap dealer and market-maker for commodities, currencies and derivative contracts thereon. J. Aron’s payment obligations to the Commodity Supplier under the Commodity Sale and Service Agreement have been unconditionally guaranteed by GSG. See “THE COMMODITY SALE AND SERVICE AGREEMENT — Security.”

According to Platts Gas Daily, J. Aron was the seventeenth largest marketer of physical natural gas in North America during the second quarter of 2022 at 3.24 Bcf/day. Since 2006, J. Aron has executed more than thirty energy prepayment transactions with municipal utilities and joint action agencies. As of January 1, 2023, it is contractually committed to deliver over 550,000 MMBtu/day of physical gas supplies in the aggregate to approximately 400 municipal utilities at over 40 delivery points under these transactions. In 2022, J. Aron delivered an average of 34,500 MMBtu/day to municipal utilities outside of natural gas and electric prepayments.

GSG, together with its consolidated subsidiaries, is a leading global financial institution that delivers a broad range of financial services across investment banking, securities, investment management and consumer banking to a large and diversified client base that includes corporations, financial institutions, governments and individuals. See “GSG, J. ARON AND THE COMMODITY SUPPLIER.”

CERTAIN RELATIONSHIPS

The Commodity Supplier, which is the prepaid seller under the Commodity Purchase Agreement, the Receivables Purchaser, the counterparty to the Commodity Supplier Commodity Swap, the buyer under the Commodity Sale and Service Agreement and the depositor under the Funding Agreement, is wholly owned by J. Aron. J. Aron has right to direct certain ordinary course actions taken by the Commodity Supplier.

J. Aron is wholly owned by GSG, and the payment obligations of J. Aron to the Commodity Supplier under the Commodity Sale and Service Agreement are unconditionally guaranteed by GSG. Goldman Sachs & Co. LLC, the Underwriter, is also wholly owned by GSG.

The members of SMUD’s Board of Directors also serve as members of NCEA’s Commission and certain of SMUD’s officers, including its Chief Executive Officer, Chief Financial Officer, Treasurer and Controller, jointly serve in the same or similar capacities as officers of NCEA. NCEA has no independent employees.

The relationships described above could create an actual or apparent conflict of interest.

This Official Statement includes information regarding and descriptions of NCEA, the Commodity Project, the Commodity Supplier, J. Aron, GSG, the Funding Recipient, the Commodity Swap Counterparty, the Project Participant and the Bonds, and summaries of certain provisions of the Indenture, the Commodity Supply Contract, the Commodity Purchase Agreement, the Commodity Sale and Service Agreement, the Funding Agreement, the Commodity Swaps, the Receivables Purchase Provisions, the Re-Pricing Agreement, the Investment Agreement, and the Custodial Agreements referred to herein. Such descriptions and summaries do not purport to be complete or definitive, and such summaries are qualified by reference to such documents. Certain of these documents are available to prospective investors during the initial offering period of the Bonds and thereafter to Bondholders, in each case upon request to NCEA. Descriptions of the Indenture, the Bonds, the Commodity Supply Contract, the Commodity Swaps, the Investment Agreement, the Custodial Agreements, the Receivables Purchase Provisions, the Re-Pricing Agreement, the Commodity Sale and Service Agreement, the Funding Agreement and the Commodity Purchase Agreement are qualified by reference to bankruptcy laws affecting the remedies for the enforcement of the rights and security provided therein and the effect of the exercise of police and regulatory powers by federal and state authorities.

This Official Statement describes the terms of the Bonds only during the Interest Rate Reset Period and must not be relied upon after interest on the Bonds is converted to another Interest Rate Period.

INVESTMENT CONSIDERATIONS

The purchase of the Bonds involves certain investment considerations discussed throughout this Official Statement. Prospective purchasers of the Bonds should make a decision to purchase the Bonds only after reviewing the entire Official Statement and making an independent evaluation of the information contained herein. Certain of those investment considerations are summarized below. This summary does not purport to be complete, and the order in which the following investment considerations are presented is not intended to reflect their relative significance.

SPECIAL AND LIMITED OBLIGATIONS

The Bonds are limited obligations of NCEA and are payable solely from and secured solely by the Trust Estate pledged pursuant to the Indenture. The Trust Estate includes only the proceeds, revenues, funds and rights related to the Commodity Project, as described under “SECURITY FOR THE BONDS—The Indenture” below, and does not include any other revenues or assets of NCEA. The Bonds are not general obligations of NCEA, and NCEA has no taxing power.

Only NCEA is obligated to pay the Bonds. The Project Participant is not obligated to make payments in respect of the debt service on the Bonds. The Project Participant is obligated only to purchase and pay for Commodities tendered for delivery by NCEA, subject to the limitations noted in the Commodity Supply Contract, at the prices set forth therein, which are market-based prices or fixed contract prices. None of the Commodity Supplier, J. Aron, GSG or the Funding Recipient is obligated to make debt service payments on the Bonds, and none of them has guaranteed payment of the Bonds.

STRUCTURE OF THE COMMODITY PROJECT

The expected and intended source of the Revenues and other amounts to be used to pay the debt service on the Bonds are (a) the amounts payable by the Project Participant under the Commodity Supply Contract, (b) any net amounts payable to NCEA under the NCEA Commodity Swap and (c) the principal amounts payable by the Investment Agreement Provider for the Debt Service Account. The Commodity Purchase Agreement, the Commodity Sale and Service Agreement, the Commodity Supply Contract, the Investment Agreements, the Commodity Swaps, the Indenture, the Bonds and related agreements have been structured so that, assuming timely performance and payment by the Funding Recipient, GSG (as the guarantor of J. Aron's payment obligations under the Commodity Sale and Service Agreement), the Investment Agreement Providers and the Project Participant of their respective contract obligations, the Revenues (defined herein) available to NCEA from the Commodity Project are calculated to be sufficient at all times to provide for the timely payment of the scheduled Debt Service requirements on the Bonds and the amounts due by NCEA under the NCEA Commodity Swap and the other Operating Expenses of the Commodity Project. These arrangements include:

- The Commodity Supplier is required to deliver Commodities under the Commodity Purchase Agreement in specified quantities at designated delivery points that correspond to the quantities of Commodities and delivery points that NCEA has committed to serve under the Commodity Supply Contract. In the event the Commodity Supplier fails to deliver the Commodities for any reason, including force majeure events, it is required to pay specified amounts to NCEA. In the event that the Assigned Gas Quantity or the Assigned Prepay Quantity is not delivered or taken under an Upstream Supply Contract or an Assigned PPA, NCEA is deemed to have requested that the Commodity Supplier remarket such assigned quantity, and the Commodity Supplier is required to pay specified amounts to NCEA.
- J. Aron is required to sell and deliver Commodities under the Commodity Sale and Service Agreement in specified quantities at designated delivery points that correspond to the quantities of Commodities and the delivery points that the Commodity Supplier has committed to serve under the Commodity Purchase Agreement. In the event J. Aron fails to deliver such Commodities for any reason, including force majeure events, it is required to pay certain specified amounts to the Commodity Supplier. The Commodity Supplier may net any amounts due and owing to it by J. Aron against its monthly payments to J. Aron, but J. Aron is not entitled to net any amounts due and owing to it against its monthly payments to the Commodity Supplier.
- The Scheduled Withdrawal Amounts required to be paid by the Funding Recipient under the Funding Agreement will provide the Commodity Supplier with amounts sufficient to make the payments it is required to make to J. Aron under the Commodity Sale and Service Agreement and any net amounts due to the Commodity Swap Counterparty under the Commodity Supplier Commodity Swap.
- The Project Participant has agreed to pay for Commodities tendered for delivery under the Commodity Supply Contract at the applicable Contract Price, and to pay specified damages to NCEA for a failure to accept Commodities tendered for delivery by NCEA, subject to the terms of the Commodity Supply Contract and the provisions with respect to a failure to take the Assigned Gas Quantity or the Assigned Prepay Quantity.

- In the event that the Project Participant fails to pay when due any amounts owed under the Commodity Supply Contract (whether for Commodities taken or damages for Commodities tendered but not taken), NCEA has covenanted in the Indenture to exercise its right under the Commodity Supply Contract to suspend further deliveries of Commodities to the Project Participant.
- In the event of a suspension of Commodity deliveries, J. Aron will remarket such quantities of Commodities pursuant to the Commodity Sale and Service Agreement in compliance with the requirements of the Commodity Purchase Agreement. The Commodity Purchase Agreement requires specified payments for all Commodities remarketed or purchased, less certain applicable fees.
- In the event that any non-complying remarketing sales of Commodities are not remediated within two years and exceed certain cumulative limits, a Ledger Event will occur, subject to certain provisions of the Commodity Purchase Agreement. If a Ledger Event occurs, J. Aron will be obligated to pay the Commodity Supplier, and the Commodity Supplier will be obligated to pay NCEA, scheduled Ledger Event Payments calculated to provide a sum sufficient (together with the interest component of the Scheduled Debt Service Deposits) to enable NCEA to pay interest on the Bonds at the Increased Interest Rate of 8.00% per annum. The Indenture provides that, subject to NCEA's receipt of such Ledger Event Payments from the Commodity Supplier, interest on the Bonds will be paid at the Increased Interest Rate after the occurrence of a Ledger Event.
- If the Commodity Swap Counterparty does not make a required payment under the NCEA Commodity Swap and such payment remains unpaid after the expiration of any grace period, the Custodian under the terms of the Commodity Supplier Custodial Agreement will pay the amount that the Commodity Supplier paid under the Commodity Supplier Commodity Swap (or in the event of termination of the Commodity Supplier Commodity Swap, the amount that the Commodity Supplier paid into the custodial account as if the Commodity Supplier Commodity Swap were still in effect), which such amount is held in custody, to NCEA, and such payment will be treated as a Commodity Swap Receipt for purposes of the Indenture.
- If the Commodity Swap Counterparty does not make a required payment under the NCEA Commodity Swap and such payment remains unpaid after the expiration of any grace period, the Custodian under the terms of the Commodity Supplier Custodial Agreement will pay the amount that the Commodity Supplier paid under the Commodity Supplier Commodity Swap (or in the event of termination of the Commodity Supplier Commodity Swap, the amount that the Commodity Supplier paid into the custodial account as if the Commodity Supplier Commodity Swap were still in effect), which such amount is held in custody, to NCEA, and such payment will be treated as a Commodity Swap Receipt.
- If a Commodity Delivery Termination Date occurs under the Commodity Purchase Agreement, the Commodity Supplier is required to pay scheduled monthly amounts to NCEA in lieu of Commodity deliveries, which amounts are sufficient to enable NCEA to make the Scheduled Debt Service Deposits required by the Indenture.

- If an [Event of Default] occurs under the Funding Agreement, the Funding Recipient is required to pay the [Final Payment Amount] to the Commodity Supplier.
- If a Termination Payment Event occurs under the Commodity Purchase Agreement, the Commodity Supplier is required to pay the scheduled Termination Payment to the Trustee.
- The amounts required to be paid by the Investment Agreement Providers under the Investment Agreements will, together with the Scheduled Debt Service Deposits and the other amounts required to be deposited into the Debt Service Account, provide sufficient monies to NCEA to pay debt service.

PERFORMANCE BY OTHERS

The ability of NCEA to pay timely the scheduled debt service on the Bonds depends on the timely performance and payment by (a) the Commodity Supplier under the Commodity Purchase Agreement and the Commodity Supplier Commodity Swap, (b) the Project Participant under the Commodity Supply Contract and (c) the Investment Agreement Providers under the Investment Agreements. The failure by any one or more of such parties to meet such obligations could materially and adversely affect the ability of NCEA to pay timely the scheduled debt service on the Bonds, and to meet its other obligations under the Indenture, the Commodity Purchase Agreement, the Commodity Supply Contract and the NCEA Commodity Swap.

The ability of the Commodity Supplier to meet its performance and payment obligations under the Commodity Purchase Agreement, the Commodity Sale and Service Agreement and the Commodity Supplier Commodity Swap will depend directly and materially on timely payment by the Funding Recipient of the scheduled payments due under the Funding Agreement and on timely payment and performance by J. Aron of its obligations under the Commodity Sale and Service Agreement. The failure by the Funding Recipient or J. Aron to meet such obligations would materially and adversely affect the ability of the Commodity Supplier to meet its contract obligations to NCEA and, in turn, the ability of NCEA to meet its contract obligations to the Project Participant. The failure by the Funding Recipient to meet such obligations would materially and adversely affect the ability of NCEA to pay timely the scheduled debt service on the Bonds.

The events and conditions that could result in a default in the payment of debt service on the Bonds, include items that may be within or outside the control of NCEA or the Commodity Supplier (or both), such as:

- failure by the Funding Recipient to make timely payment of the scheduled amounts due under the Funding Agreement would result in an Early Termination Payment Event and a default in the payment of debt service on the Bonds;
- failure by the Project Participant in the timely payment of the amounts due under the Commodity Supply Agreement could result in a default in the payment of debt service on the Bonds if such non-payments exceed the amount on deposit in the Debt Service Reserve Account;
- failure by an Investment Agreement Provider to make timely payment of the required amounts due or payable under the Investment Agreements, including upon non-payment by the Project

Participant under the Commodity Supply Contract, could result in a default in the payment of debt service on the Bonds; and

- failure by the Commodity Swap Counterparty to make timely payment of the amounts due under the NCEA Commodity Swap coupled with a failure in the timely performance and enforcement of the Commodity Supplier Custodial Agreement and the Commodity Supplier Commodity Swap could result in a default in the payment of debt service on the Bonds.

The Commodity Purchase Agreement will terminate automatically upon the occurrence of a Termination Payment Event. If a Termination Payment Event occurs during the Initial Interest Rate Period (a) the Funding Recipient will be obligated to pay to the Commodity Supplier the final [Scheduled Withdrawal] due under the Funding Agreement, (b) the Commodity Supplier will be obligated to pay the scheduled Termination Payment on the Early Termination Payment Date, and (c) the Bonds will be subject to extraordinary mandatory redemption.

The scheduled amount of the Termination Payment, together with the amounts required to be on deposit in certain Funds and Accounts held by the Trustee, has been calculated to provide NCEA with an amount at least sufficient to redeem all of the Bonds, assuming that the Commodity Supplier, the Funding Recipient and the Investment Agreement Providers pay and perform their respective contract obligations when due. If the Termination Payment becomes payable, the Bonds are to be redeemed at their Amortized Value, regardless of reinvestment rates at the time. See “THE COMMODITY PURCHASE AGREEMENT—Early Termination” and “THE BONDS—Redemption—*Extraordinary Mandatory Redemption*.”

COMMODITY REMARKETING

If the Project Participant does not require or is unable to receive all or any portion of the Commodities that it is obligated to purchase under the Commodity Supply Contract as a result of decreased gas requirements due to reduced generation requirements during the Gas Delivery Period or decreased demand by the Project Participant’s retail customers or for other reasons permitting remarketing thereunder, it may request that NCEA arrange for the Commodity Supplier to remarket such Commodity. Under the Commodity Purchase Agreement, the Commodity Supplier has agreed, upon written notice from NCEA or the Trustee, to use commercially reasonable efforts to remarket or cause to be remarketed, on a daily or monthly basis, such amounts of Commodities as are identified by NCEA, including Commodities that are covered by a Remarketing Election given by the Project Participant with respect to a Reset Period. In the event that the Commodity Supplier is unable to remarket all or any portion of such Commodity, the Commodity Supplier will purchase the Commodity for its own account.

The Commodity Supplier has agreed to use Commercially Reasonable Efforts to remarket the Commodities to Municipal Utilities pursuant to provisions that are intended to maintain the tax-exempt status of interest on the Bonds (“*Qualified Sales*”), but, if the Commodity Supplier cannot do so, the Commodity Supplier is also permitted to remarket such Commodity to other governmental entities in non-private business use sales (“*Non-Private Business Sales*”), although it is not required to remarket Commodities a net price that is less than the minimum remarketing price specified in the Commodity Purchase Agreement. If the Commodity Supplier is unable to remarket Commodity in Qualified Sales or Non-Private Business Sales, it must purchase the Commodity for its own account (a private business use sale). Under certain circumstances and upon reaching certain thresholds that are not timely remediated, the remarketing of Commodities to entities other than

Municipal Utilities and the purchase of Commodities by the Commodity Supplier could result in a Ledger Event under the Commodity Purchase Agreement.

The Commodity Supplier will depend upon performance by J. Aron under the Commodity Sale and Service Agreement to meet its commodity remarketing obligations under the Commodity Purchase Agreement, including particularly the ability of J. Aron to remarket Commodities in Qualified Sales to Municipal Utilities and to remediate any non-complying sales in order avoid the occurrence of a Ledger Event under the Commodity Purchase Agreement. In the event that any non-complying remarketing sales of Commodities are not remediated within two years and exceed certain cumulative limits, a Ledger Event will occur, subject to certain provisions of the Commodity Purchase Agreement.

The occurrence of a Ledger Event [provides the Commodity Supplier with the option to designate a Commodity Delivery Termination Date, and provides the Funding Recipient with the option to exercise the Funding Recipient Acceleration Option] which, if exercised, would result in a Termination Payment Event under the Commodity Purchase Agreement and a mandatory redemption of the Bonds. If a Ledger Event occurs, and [] does not exercise the [] Acceleration Option, J. Aron will be obligated to pay the Commodity Supplier, and the Commodity Supplier will be obligated to pay NCEA, scheduled Ledger Event Payments calculated to provide a sum sufficient to enable NCEA to pay interest on the Bonds at the Increased Interest Rate of 8.00% per annum. The Indenture provides that, subject to NCEA's receipt of such Ledger Event Payments from the Commodity Supplier, interest on the Bonds will be paid at the Increased Interest Rate after the occurrence of a Ledger Event. See "THE COMMODITY PURCHASE AGREEMENT— Commodity Remarketing" and "—Ledger Event," "THE COMMODITY SALE AND SERVICE AGREEMENT—J. Aron as Agent" and "—Ledger Event Payments," and "THE BONDS—Increased Interest Rate Upon Ledger Event."

The Commodity Project will deliver an average of [] million MMBtu of natural gas each year to the Project Participant during the Gas Delivery Period [and is expected to deliver [] MWh of electricity each year to the Project Participant during the Electricity Delivery Period]. See "THE COMMODITY PURCHASE AGREEMENT—Commodities Remarketing."

LIMITATIONS ON EXERCISE OF REMEDIES

The remedies available to NCEA under the Commodity Purchase Agreement are limited to those described herein. NCEA has no rights to enforce the provisions of the Funding Agreement, the Commodity Sale and Service Agreement or the related CSSA Guaranty (defined below) provided to the Commodity Supplier. Neither the Trustee nor the Bondholders have any rights to enforce the Funding Agreement, the Commodity Sale and Service Agreement or the CSSA Guaranty. See "GSG, J. ARON AND THE COMMODITY SUPPLIER—The Commodity Supplier—*Organization*" for a description of certain consent and voting rights of the director appointed by NCEA to the Commodity Supplier's board of directors and related covenants of NCEA.

The remedies available to the Trustee, NCEA and the Holders of the Bonds upon an Event of Default under the Indenture are in many respects dependent upon judicial actions which are often subject to discretion and delay. Under existing constitutional and statutory provisions and judicial decisions, the remedies provided in the Indenture may not be readily available or may be limited.

ENFORCEABILITY OF CONTRACTS

The enforceability of the various legal agreements relating to the Commodity Project may be limited by bankruptcy, reorganization, insolvency, moratorium or other similar laws affecting the rights of creditors or secured parties generally and by the exercise of judicial discretion in accordance with general principles of equity and by principles of equity, public policy and commercial reasonableness. The Commodity Purchase Agreement and other agreements relating to the Commodity Project are executory contracts. If NCEA or the Funding Recipient, the Commodity Supplier, J. Aron, GSG, the Commodity Swap Counterparty, the Investment Agreement Provider, the Project Participant or any of the parties with which NCEA has contracted under such agreements (including the Commodity Purchase Agreement) is involved in a bankruptcy proceeding, the relevant agreement could be discharged in return for a claim for damages against the party's estate with uncertain value. In particular, an insolvency event with respect to the Funding Recipient that results in a delay or a reduction in the payments due under the Funding Agreement will result in insufficient amounts being available for the payment of the Bonds, whether on a Bond Payment Date, the Mandatory Tender Date or any extraordinary mandatory redemption date. In the event that NCEA is involved in an insolvency proceeding, the exercise of the remedies afforded to the Trustee under the Indenture may be stayed, and the availability of the Revenues necessary for the payment of the Bonds could be materially and adversely affected.

NO ESTABLISHED TRADING MARKET

The Bonds constitute a new issue with no established trading market. The Bonds have not been registered under the Securities Act of 1933 in reliance upon exemptions contained therein. Although the Underwriter has informed NCEA that it currently intends to make a market in the Bonds, the Underwriter is not obligated to do so and may discontinue any such market making at any time without notice. There can be no assurance as to the development or liquidity of any market for the Bonds. If an active public market does not develop, the market price and liquidity of the Bonds may be adversely affected.

LOSS OF TAX EXEMPTION

As described below, the opinion of Bond Counsel with respect to the exclusion of interest on the Bonds from gross income for federal income tax purposes is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service (the "IRS") or the courts, and is not a guarantee of a result.

The Indenture, NCEA's Tax Agreement with respect to the Bonds, the Commodity Purchase Agreement and the Commodity Supply Contract contain various covenants and agreements on the part of NCEA, the Commodity Supplier and the Project Participant that are intended to establish and maintain the tax-exempt status of the interest on the Bonds. NCEA, the Commodity Supplier and the Project Participant have each agreed to abide by the various covenants and agreements designed to protect the tax-exempt status of the Bonds. A failure by NCEA, the Commodity Supplier and the Project Participant to comply with such covenants and agreements could, directly or indirectly, adversely affect the tax-exempt status of the Bonds.

The IRS has an ongoing program of auditing tax-exempt obligations to determine whether, in the view of the IRS, interest on such tax-exempt obligations is includable in the gross income of the owners thereof for federal income tax purposes. It cannot be predicted whether or not the IRS will commence an audit of the Bonds.

If an audit is commenced, under current procedures the IRS may treat NCEA as a taxpayer and the Bondholders may have no right to participate in such procedure. The commencement of an audit could adversely affect the market value and liquidity of the Bonds until the audit is concluded, regardless of the ultimate outcome.

Any loss of the tax-exempt status of the Bonds could be retroactive to the date of issuance of the Bonds and could cause all of the interest on the Bonds to be includable in gross income for purposes of federal income taxation. *The loss of the tax-exempt status of the Bonds is not a termination event under the Commodity Purchase Agreement and will not result in a mandatory redemption of the Bonds.* See “THE COMMODITY PURCHASE AGREEMENT—Ledger Event” and “TAX MATTERS.”

SECURITY FOR THE BONDS

THE INDENTURE

The Bonds are limited obligations of NCEA payable solely from and secured solely by a pledge of and lien on the “*Trust Estate*,” which is defined in the Indenture as follows: (a) the proceeds of the sale of the Bonds, (b) all right, title and interest of NCEA in, to and under the Commodity Supply Contract, (c) the Revenues, (d) any Termination Payment or the right to receive such Termination Payment (subject to the Collateral Agency Agreement), (e) all right, title and interest of NCEA in, to and under the Receivables Purchase Provisions, including payments received from the Commodity Supplier pursuant thereto, (f) all right, title and interest of NCEA in, to and under each Interest Rate Swap and the Interest Rate Swap Receipts, and (g) the Pledged Funds (but excluding Rebate Payments held in any Fund or Account), including the investment income, if any, thereof. The pledge of and lien on the Trust Estate under the Indenture is subject to (x) the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth therein, including use of the Revenues to pay first, Rebate Payments then due and payable, second, the Commodity Swap Payments then due and payable and third, the other Operating Expenses of the Commodity Project, and (y) a prior lien on and security interest in the Commodity Swap Reserve Account and the amounts and investments on deposit therein in favor of the Commodity Swap Counterparty. Any Additional Termination Payment and the right to receive any Additional Termination Payment that is payable under the Commodity Purchase Agreement is not pledged as a part of the Trust Estate.

The term “*Revenues*” is defined in the Indenture as follows: (a) all revenues, income, rents, user fees or charges, and receipts derived or to be derived by NCEA from or attributable or relating to the ownership and operation of the Commodity Project, including all revenues attributable or relating to the Commodity Project or to the payment of the costs thereof received or to be received by NCEA under the Commodity Supply Contract and the Commodity Purchase Agreement or otherwise payable to the Trustee (for the account of NCEA) for the sale and/or transportation of natural gas or electricity or otherwise with respect to the Commodity Project, (b) interest received or to be received on any moneys or securities (other than moneys or securities held in the Acquisition Account, moneys or securities held in the Redemption Account in the Debt Service Fund, or that portion of moneys in the Operating Fund required for Rebate Payments) held pursuant to the Indenture and paid or required to be paid into the Revenue Fund, and (c) any Commodity Swap Receipts received by the Trustee (on behalf of NCEA). The term “*Revenues*” does not include (r) any Termination Payment or any Additional Termination Payment paid pursuant to the Commodity Purchase Agreement, (s) amounts required to be deposited into the Commodity Remarketing Reserve Fund in accordance with the Indenture, (t) Ledger Event Payments received from the Commodity Supplier pursuant to the Commodity Purchase Agreement, (u) any

assignment payment received from the Commodity Supplier, (v) any Interest Rate Swap Receipts, [(w) any Supply Administration Fee,] (x) payments received from the Commodity Supplier pursuant to the Receivables Purchase Exhibit; (y) any Investment Agreement Breakage Amount payable to NCEA; and (z) any Seller Swap MTM Payment payable to NCEA. The Revenues are to be applied in accordance with the priorities established under the Indenture, including the prior payment from the Revenues of the Operating Expenses of the Commodity Project. See “—Flow of Funds” below.

The term “Operating Expenses” is defined in the Indenture to mean, to the extent properly allocable to the Commodity Project: (a) NCEA’s expenses for operation of the Commodity Project, including all Rebate Payments; Commodity Swap Payments; costs, collateral deposits and other amounts (other than Commodity Swap Payments) necessary to maintain the NCEA Commodity Swap; and payments required under the Commodity Purchase Agreement (which may, under certain circumstances, include imbalance charges and other miscellaneous payments) or required to be incurred under or in connection with the performance of NCEA’s obligations under the Commodity Supply Contract; and (b) any other current expenses or obligations required to be paid by NCEA under the provisions of the Indenture (other than Debt Service on the Bonds) or by law or required to be incurred under or in connection with the performance of NCEA’s obligations under the Commodity Supply Contract; *provided that*, Operating Expenses shall not include any amounts owed by NCEA under the Commodity Supply Contract with respect to purchases of replacement commodities by the Project Participant; (c) fees payable by NCEA with respect to any Remarketing Agreement for the Bonds; (d) the fees and expenses of the Fiduciaries; (e) reasonable accounting, legal and other professional fees and expenses incurred by NCEA, including but not limited to those relating to the administration of the Trust Estate and compliance by NCEA with its continuing disclosure obligations, if any, with respect to the Bonds; (f) the costs of any insurance premiums incurred by NCEA, including, without limitation, directors and officers liability insurance; and (g) fees of rating agencies necessary to maintain ratings on the Bonds. Litigation judgments and settlements and indemnification payments in connection with the payment of any litigation judgment or settlement and Extraordinary Expenses are not Operating Expenses.

THE BONDS DO NOT CONSTITUTE A DEBT OR LIABILITY OF THE STATE OF CALIFORNIA OR OF ANY POLITICAL SUBDIVISION THEREOF (INCLUDING THE PROJECT PARTICIPANT), OTHER THAN NCEA, BUT SHALL BE PAYABLE SOLELY FROM THE FUNDS PROVIDED THEREFOR UNDER THE INDENTURE. NCEA SHALL NOT BE OBLIGATED TO PAY THE PRINCIPAL OR REDEMPTION PRICE OF OR INTEREST ON THE BONDS, EXCEPT FROM THE FUNDS PROVIDED THEREFOR UNDER THE INDENTURE AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OF CALIFORNIA OR OF ANY POLITICAL SUBDIVISION THEREOF, INCLUDING NCEA, OR OF THE PROJECT PARTICIPANT IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OR REDEMPTION PRICE OF AND INTEREST ON THE BONDS. THE ISSUANCE OF THE BONDS SHALL NOT DIRECTLY OR INDIRECTLY OR CONTINGENTLY OBLIGATE THE STATE OF CALIFORNIA OR ANY POLITICAL SUBDIVISION THEREOF (INCLUDING THE PROJECT PARTICIPANT) TO LEVY OR TO PLEDGE ANY FORM OF TAXATION OR TO MAKE ANY APPROPRIATION FOR THEIR PAYMENT. NCEA HAS NO TAXING POWER.

THE OBLIGATION OF THE PROJECT PARTICIPANT TO MAKE PAYMENTS TO NCEA UNDER THE COMMODITY SUPPLY CONTRACT IS NOT, NOR SHALL IT BE CONSTRUED AS, A GUARANTY OR ENDORSEMENT OF OR A SURETY FOR, THE BONDS. SUCH OBLIGATION OF THE PROJECT PARTICIPANT IS NOT A GENERAL OBLIGATION OF THE PROJECT PARTICIPANT, AND IS PAYABLE SOLELY FROM THE REVENUES DERIVED FROM THE OPERATION OF ITS ELECTRIC SYSTEM. THE INDENTURE DOES NOT MORTGAGE THE COMMODITY PROJECT OR ANY TANGIBLE PROPERTIES OR ASSETS OF NCEA OR THE PROJECT PARTICIPANT.

See APPENDIX C for the meanings of certain defined terms, and see APPENDIX D for a further description of certain provisions of the Indenture.

FLOW OF FUNDS

All Revenues are required by the Indenture to be deposited upon receipt thereof to the credit of the Revenue Fund. Moneys must be disbursed from the Revenue Fund monthly, on or before the days and to the extent and in the manner and order set forth below:

First, into the Operating Fund, not later than the 25th day of such Month, the amount, if any, required so that the balance therein shall equal the amount estimated to be necessary for the payment of Commodity Swap Payments coming due for such Month and other Operating Expenses coming due for the following Month (but no such payments or expenses for any prior Month); *provided that*, in the event that the amount on deposit in the Operating Fund is not sufficient to pay the Commodity Swap Payments due in any Month, the amount available therein shall be applied to the payment of the amounts due under the NCEA Commodity Swap then in effect;

Second, into the Debt Service Fund, not later than the last Business Day of such Month for the credit to the Debt Service Account an amount equal to the greater of (A) the Scheduled Debt Service Deposit, as set forth in Schedule II to the Indenture, or (B) the amount necessary to cause the cumulative Scheduled Debt Service Deposits to be on deposit therein (without credit for undisbursed Interest Rate Swap Receipts on deposit therein);

Third, into the Commodity Swap Reserve Account in the Project Fund, not later than the last Business Day of such Month, the amount, if any, required so that the balance in the Commodity Swap Reserve Account is at least equal to the Minimum Amount;

Fourth, into the Debt Service Fund, not later than the last Business Day of such Month, for deposit in the Debt Service Reserve Account, the amount, if any, required so that the balance in such Debt Service Reserve Account shall equal the Debt Service Reserve Requirement related thereto as of the last day of the then current Month; and

Fifth, to the Commodity Supplier, not later than the last Business Day of such Month, the amount, if any, required for the repurchase of Call Receivables and the payment of interest on all Call Receivables sold to the Commodity Supplier pursuant to the Receivables Purchase Provisions.

If, after the scheduled monthly deposit to the Debt Service Account, the balance therein is below the cumulative Scheduled Debt Service Deposits for such month as specified in the Indenture, the Trustee shall (a) promptly notify NCEA of such deficiency and if the Project Participant is in default under the Commodity Supply Contract and NCEA has not previously done so, cause NCEA to suspend all deliveries of all quantities of natural gas or electricity to the Project Participant, and (b) promptly give notice to the Commodity Supplier to follow the provision set forth in the remarketing provisions of the Commodity Purchase Agreement.

On each [] 1, beginning [] 1, 20[], after making such transfers, credits and deposits as described in the first paragraph of this section "Flow of Funds," and after the applicable Principal Installment payment date, the Trustee shall credit to the General Fund the remaining balance in the Revenue Fund. See

“Revenues and Revenue Fund; Deposits of Other Amounts” and “Payments from Revenue Fund” in APPENDIX D.

As noted above, certain amounts are pledged as a part of the Trust Estate but do not constitute Revenues and are not deposited into the Revenue Fund, including (a) any Termination Payment received under the Commodity Purchase Agreement, which is to be deposited directly into the Redemption Account of the Debt Service Fund, (b) any Assignment Payment shall be deposited directly into the Assignment Payment Fund, (c) amounts received from the Commodity Supplier under the Receivables Purchase Provisions shall be deposited by the Trustee into the Commodity Swap Reserve Account as provided in the Indenture, (d) any Interest Rate Swap Receipts shall be deposited directly into the Debt Service Account, (e) any Seller Swap MTM Payment shall be deposited into the Swap Termination Account and applied as provided in the Indenture, (f) any amounts to be deposited into the Commodity Remarketing Reserve Fund shall be deposited directly therein, (g) any Additional Termination Payment shall be paid to, or upon Written Instructions provided by, NCEA, (h) Ledger Amount Payments received from the Commodity Supplier pursuant to the Commodity Purchase Agreement shall be deposited directly into the Debt Service Account, (i) any Investment Agreement Breakage Amount payable to NCEA shall be deposited into the Investment Agreement Breakage Account, and [(j) amounts received from the Project Participant in respect of the Supply Administration Fee shall be remitted to NCEA.]

DEBT SERVICE ACCOUNT

The Indenture establishes a Debt Service Account, which is held by the Trustee. The amounts deposited into the Debt Service Account, including capitalized interest deposited on the Initial Issue Date, must be held in such Account and applied to the payment of Debt Service payable on the Bonds on each Bond Payment Date when due and to the payment of the Redemption Price of and accrued interest on Bonds to be redeemed on each redemption date. Amounts on deposit in the Debt Service Account will be invested pursuant to the Investment Agreement, which will permit scheduled withdrawals to pay debt service on the Bonds and, in the case of extraordinary redemption, to pay the Redemption Price without penalty or market value adjustments.

DEBT SERVICE RESERVE ACCOUNT

The Indenture establishes a Debt Service Reserve Account which is held by the Trustee. Amounts in the Debt Service Reserve Account must be applied only to (a) make the Scheduled Debt Service Deposits to the Debt Service Account when the Revenues and other available amounts are insufficient or (b) redeem or defease Bonds.

The Debt Service Reserve Requirement is \$ _____*, which approximately equals 200% of the maximum monthly Scheduled Debt Service Deposit to be made to the Debt Service Account during the Interest Rate Reset Period from the amounts payable by the Project Participant under the Commodity Supply Contract. On the date of issuance of the Bonds, NCEA will deposit an amount equal to the Debt Service Reserve Requirement into the Debt Service Reserve Account, which amount will be invested pursuant to the Investment Agreement. See “ESTIMATED SOURCES AND USES OF FUNDS” above. See also “—Investment Agreement” below.

* Preliminary, subject to change.

REDEMPTION ACCOUNT

The Indenture establishes a Redemption Account, which is held by the Trustee. On any Early Termination Payment Date under the Commodity Purchase Agreement, the Commodity Supplier is directed to pay the Termination Payment directly to the Trustee for the account of NCEA into the Redemption Account. The Trustee will deposit the Termination Payment into the Redemption Account and will apply such amounts to the payment of the Redemption Price of the Bonds as described below under “THE BONDS—Redemption—*Extraordinary Mandatory Redemption.*”

COMMODITY SWAP RESERVE ACCOUNT

The Indenture establishes a Commodity Swap Reserve Account in the Project Fund, which is held by the Trustee. NCEA will deposit in the Commodity Swap Reserve Account a portion of the proceeds in an amount equal to \$_____ * (the “*Minimum Amount*”), which shall be applied from time to time by the Trustee solely to the payment of Commodity Swap Payments in the event the amounts on deposit in the Operating Fund are not sufficient to make such payments; *provided, however*, that (a) in the event that the amount on deposit in the Commodity Swap Reserve Account is not sufficient to pay the Commodity Swap Payments due in any Month, the amount available in the Commodity Swap Reserve Account shall be applied pro rata to the payment of the amounts due under the Commodity Swaps then in effect, (b) any amounts in the Commodity Swap Reserve Account in excess of the Minimum Amount shall be transferred to the Revenue Fund and (c) any amounts remaining on deposit in the Commodity Swap Reserve Account on the final date for payment of the principal of the Bonds, whether upon maturity, redemption or acceleration, shall be applied to make such payment. The amount deposited in the Commodity Swap Reserve Account will be invested pursuant to the Investment Agreement. See “THE COMMODITY PURCHASE AGREEMENT – Receivables Purchase Provisions—*Call Option*” and “– Investment of Funds” below.

NO ADDITIONAL BONDS

Other than the Bonds and any refunding bonds, no additional bonds may be issued under the Indenture.

AMENDMENT OF INDENTURE

NCEA and the Trustee may, subject to the conditions and restrictions in the Indenture, enter into a Supplemental Indenture or Indentures without the consent of the Bondholders for certain purposes and upon the satisfaction of certain conditions. See “Supplemental Indenture Not Requiring Consent of Bondholders,” “General Provisions” and “Powers of Amendment” in APPENDIX D hereto.

INVESTMENT OF FUNDS

Subject to the provisions of the Indenture, amounts on deposit in the Funds and Accounts may be invested in, among other things, guaranteed investment contracts, forward delivery agreements or similar agreements that provide for a specified rate of return over a specified time period with providers (or their guarantors) rated at the time the investment is made at least at the same credit rating level as the Funding Recipient. See APPENDIX C—DEFINITIONS OF CERTAIN TERMS and “Investment of Certain Funds” in APPENDIX D.

On the Initial Issue Date of the Bonds, it is expected that the Trustee will enter into one or more investment agreements with respect to the Debt Service Account (the “*Debt Service Account Investment Agreement*”) and the Commodity Swap Reserve Account and the Debt Service Reserve Account (the “*Reserve Accounts Investment Agreement*” and, together with the Debt Service Account Investment Agreement, the “*Investment Agreements*”). Each Investment Agreement will have a term coterminous with the Initial Interest Rate Period and is required to meet all of the criteria of a Qualified Investment under the Indenture. The Investment Agreements will be bid out on the day of Bond pricing to qualified investment providers.

Required qualifications for the initial Investment Agreement providers (the “*Investment Agreement Providers*”) include: (a) a minimum credit rating requirement for the provider (or its guarantor) of at least “[]” from Moody’s, (b) a requirement that upon a credit rating withdrawal, suspension or downgrade of an Investment Agreement Provider (or its guarantor) below the lower of “[Baa1]” by Moody’s or the then-current credit rating of the Funding Recipient, the Investment Agreement Provider will provide a credit remedy, such as providing credit support, or NCEA will have the right to terminate the Investment Agreement and (c) a requirement that upon a credit downgrade of the provider (or its guarantor) below the lower of “[Baa3]” by Moody’s, NCEA will have the option to terminate the Investment Agreement.

If an Investment Agreement terminates, all invested funds are returned to the Trustee and a market value adjustment payment is made or received, as applicable.

Each Investment Agreement will provide for a fixed interest rate to be paid on the funds invested. The Debt Service Account Investment Agreement will provide for scheduled withdrawals in connection with each Bond Payment Date. The Reserve Accounts Investment Agreement will permit (a) withdrawals from the Commodity Swap Reserve Account to make up payment shortfalls to the Commodity Swap Counterparty, and (b) withdrawals from the Debt Service Reserve Account to cure any deficiencies in the Debt Service Account. Upon transaction termination, whether by extraordinary mandatory redemption or final maturity, the funds invested under the Investment Agreements will be used to pay the redemption price or debt service due on the Bonds.

ENFORCEMENT OF PROJECT AGREEMENTS

Commodity Supply Contract. NCEA has covenanted in the Indenture that it will enforce the provisions of the Commodity Supply Contract, as well as any other contract or contracts entered into relating to the Commodity Project, and that it will duly perform its covenants and agreements thereunder.

NCEA has also covenanted to exercise promptly its right to suspend all Commodity deliveries under the Commodity Supply Contract if the Project Participant fails to pay when due any amounts owed thereunder and to promptly give notice to the Commodity Supplier to follow the Commodity remarketing provisions of the Commodity Purchase Agreement for each month of such suspension with respect to the quantities of Commodities for which deliveries have been suspended.

In the event that the Project Participant makes a Remarketing Election with respect to any Reset Period, NCEA will promptly give notice to the Commodity Supplier to follow the provisions set forth in the Remarketing Exhibit to the Commodity Purchase Agreement for each month of such Reset Period with respect to any quantities of Commodities that would otherwise have been delivered to the Project Participant. See “THE RE-PRICING AGREEMENT.”

NCEA has further covenanted that it will not consent or agree to or permit any termination or rescission of, any assignment or novation (in whole or in part) by the Project Participant of, or any amendment to, or otherwise take any action under or in connection with, a Commodity Supply Contract that will impair the ability of NCEA to comply during the current or any future year with the collection of fees and charges pursuant to the Indenture without a Rating Confirmation. Under the Indenture, upon the satisfaction of certain conditions, including delivery of a Rating Confirmation, NCEA may amend a Commodity Supply Contract or assign all or a portion of the Project Participant's rights and obligations under the Commodity Supply Contract.

Commodity Remarketing. In the event that the Project Participant fails to pay when due any amounts owed to NCEA under a Commodity Supply Contract, NCEA shall promptly give notice to the Commodity Supplier to follow the provisions set forth in the Remarketing Exhibit to the Commodity Purchase Agreement for each Month of such suspension with respect to the quantities of Commodities for which deliveries have been suspended.

Trustee as Agent. Under the Indenture, NCEA has appointed, authorized and directed the Trustee as its agent, subject to the terms of the Indenture, to issue notices and to take any other actions that NCEA is required or permitted to take under (a) the Commodity Supply Contract, (b) the Commodity Purchase Agreement, (c) the Receivables Purchase Provisions, and (d) the NCEA Commodity Swap. NCEA has retained, in the absence of any conflicting action by the Trustee, the right to exercise any rights for which it has appointed the Trustee as its agent as described in the preceding sentence; *provided, however*, if an Event of Default has occurred, the Trustee will have the right to notify NCEA to cease exercising such rights, and upon NCEA's receipt of such notice, and subject to certain rights of the Commodity Supplier and the Commodity Swap Counterparty, the Trustee will have exclusive authority to exercise such rights.

Commodity Purchase Agreement. NCEA has covenanted in the Indenture that it will enforce the provisions of the Commodity Purchase Agreement and that it will duly perform its covenants and agreements under the Commodity Purchase Agreement.

The Trustee will promptly notify NCEA upon becoming aware of any payment default that has occurred and is continuing on the part of the Commodity Supplier under the Commodity Purchase Agreement. NCEA will provide the Trustee with Written Notice of the Early Termination Payment Date (a) by 12:00 noon, New York City time, on the fifth Business Day preceding a Mandatory Purchase Date if an amount equal to the Purchase Price of the Bonds that are subject to such Mandatory Purchase Date has not been deposited with the Trustee and (b) in all other cases, not more than five days after such date is determined.

NCEA has further covenanted that it will not consent or agree to or permit any rescission or assignment of or amendment to or otherwise take any action under or in connection with the Commodity Purchase Agreement which would in any manner materially impair or materially adversely affect its rights thereunder or the rights or security of the Bondholders under the Indenture; *provided*, that the Commodity Purchase Agreement may be assigned or amended without Bondholder consent upon receipt of a Rating Confirmation.

NCEA Commodity Swap. Amounts due to NCEA under the NCEA Commodity Swap are payable directly to the Trustee for deposit into the Revenue Fund. The following restrictions apply to the replacement or termination of the NCEA Commodity Swap:

(a) NCEA agrees that it will not exercise any right to declare an early termination date under the NCEA Commodity Swap unless either (i) it has entered into a replacement NCEA Commodity Swap in accordance with the provisions described below, and such replacement NCEA Commodity Swap will be effective as of such early termination date and cover price exposure from and after such early termination date, or (ii) a “Commodity Delivery Termination Date” has occurred or has been designated under (and as such term is defined in) the Commodity Purchase Agreement prior to or as of such early termination date.

(b) NCEA may replace the NCEA Commodity Swap (and any related guaranty of a Commodity Swap Counterparty’s obligations thereunder) with a similar agreement for the same hedging purposes with an alternate Commodity Swap Counterparty at any time upon delivery to the Trustee of a Rating Confirmation.

(c) If the NCEA Commodity Swap is subject to termination or is terminated by either party in accordance with its terms, then (i) NCEA may, subject to clause (a) above, terminate such NCEA Commodity Swap if NCEA has the right to do so, and (ii) (A) NCEA may replace such NCEA Commodity Swap by exercising its right to increase its notional quantities under another NCEA Commodity Swap with another Commodity Swap Counterparty if such NCEA Commodity Swap is in effect and is not subject to termination, or (B) if NCEA cannot increase its notional quantities as described in clause (A) or if NCEA desires to enter into a new NCEA Commodity Swap in order to reduce its notional quantities under the NCEA Commodity Swap to their level previous following an increase of such notional quantities under clause (A), NCEA may enter into a replacement NCEA Commodity Swap with an alternate Commodity Swap Counterparty without Rating Confirmation, but only if the replacement NCEA Commodity Swap is identical in all material respects to the existing NCEA Commodity Swap, except for the identity of the Commodity Swap Counterparty, and (1) the replacement Commodity Swap Counterparty (or its credit support provider under such NCEA Commodity Swap) is then rated at least the lower of (a) the Minimum Rating or (b) the rating then assigned by each Rating Agency to the Bonds, or (2) such Commodity Swap Counterparty provides such collateral and security arrangements as NCEA shall determine to be necessary, and (3) in either case, such replacement Commodity Swap Counterparty enters into a replacement Commodity Supplier Custodial Agreement with the Commodity Supplier and the Custodian that is identical in all material respects to the existing Commodity Supplier Custodial Agreement for the Commodity Swap being replaced.

(d) If the NCEA Commodity Swap is not otherwise replaced but the Commodity Supplier is obligated under the Commodity Supplier Custodial Agreement to continue paying Commodity Swap Receipts in the same amount that would have applied under such NCEA Commodity Swap, then such NCEA Commodity Swap will be deemed to be replaced by such obligation under such Commodity Supplier Custodial Agreement and such obligation under the Commodity Supplier Custodial Agreement will be treated as the NCEA Commodity Swap thereafter until such terminated NCEA Commodity Swap is otherwise replaced by another NCEA Commodity Swap.

Upon the occurrence of a Commodity Swap Replacement Event (defined below), NCEA agrees in the Indenture that it shall notify the Commodity Supplier of such event pursuant to the Commodity Purchase Agreement, and in accordance with the Commodity Purchase Agreement, either (a) replace the affected NCEA Commodity Swap by exercising its right to increase its notional quantities under an NCEA Commodity Swap

with another Commodity Swap Counterparty if such a Commodity Swap is in effect and is not subject to termination, and otherwise (b) use its good faith efforts to replace such NCEA Commodity Swap with an alternate NCEA Commodity Swap during the swap replacement period set forth in the Commodity Purchase Agreement. A “Commodity Swap Replacement Event” occurs if (x) the NCEA Commodity Swap terminates, (y) NCEA or the Swap Counterparty delivers a termination notice under the NCEA Commodity Swap or (z) the NCEA Commodity Swap is otherwise reasonably anticipated to become subject to immediate termination.

ESTIMATED SOURCES AND USES OF FUNDS

The sources and uses of funds in connection with the issuance of the Bonds are approximately as follows:

SOURCES:	
Par Amount	\$
Original Issue Premium	
Available Moneys ¹	
Total Sources	\$
USES:	
Escrow Account	\$
Project Fund ²	
Debt Service Reserve Account	
Commodity Swap Reserve Account	
Costs of Issuance ³	
Total Uses	\$

⁽¹⁾ Includes available amounts on deposit in the Debt Service Fund and Working Capital Account under the 2018 Indenture.

⁽²⁾ [Includes additional prepayment to the Commodity Supplier.]

⁽³⁾ Includes management, consulting, underwriting, rating agency, Trustee, financial advisor and legal fees and other expenses related to the issuance of the Bonds and the refinancing and acquisition of the Commodity Project.

PLAN OF REFUNDING

Proceeds of the Bonds together with other available moneys will be deposited with Computershare Trust Company, N.A., as escrow agent (the “*Escrow Agent*”), pursuant to an Escrow Agreement to establish an irrevocable trust escrow account (the “*Escrow Account*”), consisting of cash and noncallable direct full faith and credit obligations of the United States of America. The amounts in the Escrow Account will be used to refund the \$537,295,000 principal amount of 2018 Bonds maturing on and after July 1, 2024 (the “*Refunded Bonds*”), and are pledged solely for the payment of the Refunded Bonds.

The investments held in the Escrow Account will bear interest and mature in amounts that are, together with the uninvested cash held in the Escrow Account, sufficient to pay the principal and redemption price of and the interest due on the Refunded Bonds on each interest payment date and on the redemption date of the Refunded Bonds. On the Initial Issue Date, NCEA will irrevocably instruct the Escrow Agent, as trustee for the Refunded Bonds, to call the Refunded Bonds maturing on July 1, 2049 for redemption on July 1, 2024. Upon the deposit of such cash and investments and satisfaction of the requirements of the 2018 Indenture, the Refunded Bonds will be deemed to be paid and will no longer be secured by the pledge of the trust estate under the 2018 Indenture.

The scheduled maturities, interest rates and CUSIP numbers for the Refunded Bonds are as follows:

SCHEDULED MATURITY	PRINCIPAL AMOUNT	INTEREST RATE	CUSIP
July 1, 2024	\$ 14,505,000	5.00%	664840AC9
July 1, 2049	522,790,000	4.00%	664840AD7

Certain mathematical computations regarding the sufficiency of the investments held in the Escrow Account will be verified by [Samuel Klein and Company]. NCEA does not intend to apply for a revised rating on the Refunded Bonds following their defeasance.

THE BONDS

GENERAL

The Bonds will mature (subject to redemption as described below) on the dates and in the principal amounts shown on the inside cover page of this Official Statement. The Bonds will be initially issued in denominations of \$5,000 and any integral multiples thereof (an “*Authorized Denomination*”). The Bonds will be initially issued in book-entry only form through the facilities of The Depository Trust Company, New York, New York (“*DTC*”). See “Book-Entry System” below and APPENDIX G for a description of DTC and its book-entry system.

INTEREST

During the Interest Rate Reset Period, the Bonds will bear interest in a Fixed Rate Period, with the Bonds of each maturity bearing interest at the fixed rate shown on the inside cover page of this Official Statement. During the Interest Rate Reset Period, interest on the Bonds will be payable semiannually on each [January 1] and [July 1], commencing _____, 20__ . Interest on the Bonds will be computed on the basis of a 360-day year of twelve 30-day months.

After the Interest Rate Reset Period, the Bonds that remain Outstanding may be remarketed into another Fixed Rate Period or may be remarketed or converted to a Daily Interest Rate Period, a Weekly Interest Rate Period, a Commercial Paper Interest Rate Period or an Index Rate Period. ***This Official Statement describes the terms of the Bonds only during the Interest Rate Reset Period and must not be relied upon after the Bonds have been converted to another Interest Rate Period.***

Interest on any Bond that is payable, and is punctually paid or duly provided for on any Interest Payment Date, shall be paid to the Person in whose name that Bond is registered at the close of business on the 15th day of the calendar month next preceding such Interest Payment Date (the “*Regular Record Date*”).

Any interest on any Bond that is payable, but is not punctually paid or duly provided for on any Interest Payment Date (“*Defaulted Interest*”), shall forthwith cease to be payable to the Person who was the registered owner on the relevant Regular Record Date; and such Defaulted Interest shall be paid by NCEA to the Persons in whose names the Bonds are registered at the close of business on a date (the “*Special Record Date*”) for the payment of such Defaulted Interest, which shall be fixed in the following manner: NCEA shall notify the Bond

Registrar in writing of the amount of Defaulted Interest proposed to be paid on each Bond and the date of the proposed payment, and at the same time NCEA shall deposit with the Paying Agent an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to and approved in writing by the Paying Agent for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as provided in the Indenture. The Bond Registrar will then fix a Special Record Date for the payment of such Defaulted Interest which will be not more than 15 days or less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Bond Registrar of written notice of the proposed payment. The Bond Registrar shall promptly notify NCEA of such Special Record Date and, in the name and at the expense of NCEA, will cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be mailed, first class postage prepaid, to each Bondholder at its address as it appears upon the registry books, not less than 10 days prior to such Special Record Date.

INCREASED INTEREST RATE UPON LEDGER EVENT

If a Ledger Event occurs, J. Aron will be obligated to pay the Commodity Supplier, and the Commodity Supplier will be obligated to pay NCEA, scheduled Ledger Event Payments calculated to provide a sum sufficient (together with the interest component of the Scheduled Debt Service Deposits) to enable NCEA to pay interest on the Bonds at the Increased Interest Rate of 8.00% per annum. The Indenture provides that, subject to NCEA's receipt of such Ledger Event Payments from the Commodity Supplier, interest on the Bonds will be paid at the Increased Interest Rate from and including the day on which a Ledger Event occurs to but not including the earlier of (a) the date on which a Termination Payment Event occurs under the Commodity Purchase Agreement, (b) the Mandatory Purchase Date or any prior redemption date or (c) the Interest Payment Date immediately succeeding the last date on which the Commodity Supplier paid the Ledger Event Payments. Under the Commodity Purchase Agreement, any Ledger Event would occur on and as of the first day of a Month.

See "THE COMMODITY PURCHASE AGREEMENT—Ledger Event" below for a description of the provisions of the Commodity Purchase Agreement relating to a Ledger Event and the amounts payable by the Commodity Supplier to NCEA following a Ledger Event. See "THE COMMODITY SALE AND SERVICE AGREEMENT—Ledger Event Payments" below for a description of the provisions of the Commodity Sale and Service Agreement relating to the amounts payable by J. Aron to the Commodity Supplier following a Ledger Event.

Interest on the Bonds at the Increased Interest Rate will be payable on each regular Interest Payment Date, any redemption date and the Mandatory Purchase Date. NCEA will give prompt notice to the Trustee of the occurrence of a Ledger Event and whether the Increased Interest Rate becomes payable on the Bonds. Interest on the Bonds at an Increased Interest Rate will be computed on the basis of a 360-day year consisting of twelve 30-day months and will be payable in the same manner as the interest borne by the Bonds on the Initial Issue Date.

For purposes of the Indenture:

(a) any Ledger Event Payments received by NCEA from the Commodity Supplier in respect of a Ledger Event shall not constitute an item of "Revenues" and shall be deposited directly into the Debt Service Account; and

(b) the Scheduled Debt Service Deposits required by the Indenture shall be computed on the basis of the interest rates borne by the Bonds on the Initial Issue Date and shall not be re-computed in the event that the Bonds bear interest at an Increased Interest Rate.

TENDER

Mandatory Tender. The Bonds maturing on _____, 20__ are required to be tendered for purchase on _____, 20__ (the “*Mandatory Purchase Date*”), which is the day following the end of the Interest Rate Reset Period. The Purchase Price of the Bonds on the Mandatory Purchase Date is equal to 100% of the principal amount thereof and is payable in immediately available funds *first* from amounts on deposit in the Remarketing Proceeds Account established by the Indenture and *second* from amounts on deposit in the NCEA Purchase Account established by the Indenture. Accrued interest due on the Bonds on the Mandatory Purchase Date, which is an Interest Payment Date, shall be paid from amounts in the Debt Service Account.

The Purchase Price of each Bond on the Mandatory Purchase Date shall be payable only upon surrender of such Bond to the Trustee at its designated corporate trust office, accompanied by an instrument of transfer thereof in form satisfactory to the Trustee, executed in blank by the Owner thereof or by the Owner’s duly-authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange at or prior to 10:00 a.m., New York City time, on the date specified for such delivery in a notice provided to the Owners by the Trustee, such notice to be given no less than 30 days prior to the Mandatory Purchase Date. In the event that any Owner of a Bond so subject to mandatory tender for purchase shall not surrender such Bond to the Trustee for purchase on the Mandatory Purchase Date, then such Bond shall be deemed to be an Undelivered Bond, and that no interest shall accrue thereon on and after such Mandatory Purchase Date and that the Owner thereof shall have no rights under the Indenture other than to receive payment of the Purchase Price thereof.

Failed Remarketing. Under the Indenture, “*Failed Remarketing*” means the failure (i) of the Trustee to receive the Purchase Price of any Bond required to be purchased on a Mandatory Purchase Date by 12:00 noon, New York City time, on the fifth Business Day preceding such Mandatory Purchase Date or (ii) to purchase or redeem such Bond in whole by such Mandatory Purchase Date (including from any funds on deposit in the Assignment Payment Fund and required to be used for such redemption). A Failed Remarketing is a Termination Payment Event, and will result in an Early Termination Payment Date, under the Commodity Purchase Agreement, and the extraordinary redemption of the Bonds on the Mandatory Purchase Date. Such an extraordinary redemption of the Bonds has the same economic effect on Bondholders as a mandatory tender of the Bonds on the Mandatory Purchase Date.

No Optional Tender. The Bonds of are **not** subject to optional tender by Bondholders during the Interest Rate Reset Period.

REDEMPTION

Optional Redemption. The Bonds are subject to redemption at the option of NCEA in whole or in part (in such amounts and by such maturities as may be specified by NCEA and by lot within a maturity) on any date preceding the first Business Day of the third month preceding the Mandatory Purchase Date at a Redemption Price, calculated by a quotation agent selected by NCEA, equal to the greater of:

(a) the sum of the present values of the remaining unpaid payments of principal and interest to be paid on the Bonds to be redeemed from and including the date of redemption (not including any portion of the interest accrued and unpaid as of the redemption date) to the earlier of (i) the stated maturity date(s) of such Bonds or (ii) the Mandatory Purchase Date, discounted to the date of redemption on a semiannual basis at a discount rate equal to the Applicable Tax-Exempt Municipal Bond Rate (as defined in APPENDIX C) for such Bonds minus 0.25% per annum, and

(b) the Amortized Value thereof (described below);

in each case plus accrued and unpaid interest to the date of redemption at the Fixed Rate or an Increased Interest Rate, whichever is then in effect.

The Bonds maturing on and after the Mandatory Purchase Date are also subject to redemption at the option of NCEA in whole or in part on and after the first Business Day of the third month preceding the Mandatory Purchase Date at a Redemption Price, calculated by a quotation agent selected by NCEA, equal to the Amortized Value thereof as of the date of redemption, plus \$0.[] per \$1,000 of the principal amount thereof and accrued and unpaid interest to the date of redemption; *provided that*, if the redemption date of the Bonds is on the Mandatory Purchase Date, the Redemption Price will be 100% of the principal amount of the Bonds to be redeemed plus accrued and unpaid interest to the date of redemption. In lieu of redeeming Bonds pursuant to this provision, NCEA may direct the Trustee to purchase such Bonds at a Purchase Price equal to the Redemption Price described above. Any Bonds so purchased may be remarketed in a new Interest Rate Period.

“*Amortized Value*” means, with respect to any Bond to be redeemed during the Interest Rate Reset Period, the principal amount of such Bond multiplied by the price of such Bond expressed as a percentage, calculated by a major market maker in municipal securities, as the quotation agent, selected by NCEA, based on the industry standard method of calculating bond prices (as such industry standard prevails on the date of delivery of the Bonds), with a delivery date equal to the date of redemption, a maturity date equal to the earlier of (a) the stated maturity date of such Bond, or (b) the Fixed Rate Tender Date of such Bond and a yield equal to such Bond’s original reoffering yield (as set forth on the inside cover page of this Official Statement). The Amortized Value of the Bonds as of certain dates during the Interest Rate Reset Period is shown on APPENDIX H.

Extraordinary Mandatory Redemption. The Bonds are subject to mandatory redemption prior to maturity in whole and not in part on the first day of the month following the Early Termination Payment Date (which will be the same day as the Mandatory Purchase Date in the event a Failed Remarketing has occurred) at a Redemption Price equal to the Amortized Value thereof, plus accrued interest to the redemption date.

See APPENDIX H for a schedule showing the Redemption Price (excluding accrued interest) of all of the Bonds upon an extraordinary mandatory redemption following an Early Termination Payment Date that occurs during the Interest Rate Reset Period.

NCEA shall provide the Trustee with Written Notice of the Early Termination Payment Date (x) by noon New York City time on the fifth Business Day preceding a Mandatory Purchase Date if an amount equal to the Purchase Price of the Bonds that are subject to such Mandatory Purchase Date has not been deposited with the Trustee, and (y) in all other cases, not more than five days after such date is determined.

Mandatory Sinking Fund Redemption. The Bonds maturing _____, 20__ are subject to redemption prior to their stated maturity in part (by lot) from Sinking Fund Installments, at the principal amount thereof, without premium, on each of the dates set forth below and in the following amounts:

YEAR ([] 1)	SINKING FUND INSTALLMENT	YEAR ([] 1)	SINKING FUND INSTALLMENT
-----------------	-----------------------------	-----------------	-----------------------------

*

Stated maturity.

Notice of Redemption. In the case of early redemption of Bonds, the Trustee must cause notice of such redemption to be given to the Holder of any Bonds designated for redemption, in whole or in part, at such Holder's address as the same shall last appear upon the registration books maintained by the Trustee, by mailing a copy of the redemption notice, by first-class mail, postage prepaid, not less than 20 days (15 days in the case of an extraordinary mandatory redemption described above) and not more than 45 days (30 days in the case of an extraordinary mandatory redemption described in the preceding paragraph) prior to the redemption date.

Each notice of redemption must identify the Bonds to be redeemed and state (i) the redemption date, (ii) the Redemption Price or the manner in which it will be calculated, (iii) that the Bonds called for redemption must be surrendered to collect the Redemption Price, (iv) the address or addresses of the Trustee at which the Bonds redeemed must be surrendered, and (v) that interest on the Bonds called for redemption ceases to accrue on the redemption date. Neither any defect in any redemption notice nor the failure of any Holder to receive any such notice will affect the validity of the proceedings for the redemption of the Bonds or any portions thereof with respect to any Holder to whom proper notice as required by the Indenture was given.

In the event that the Bonds may be subject to extraordinary redemption as a result of a Failed Remarketing that could occur if the Trustee has not receiving the Purchase Price of the Bonds by noon New York City time on the fifth Business Day preceding a Mandatory Purchase Date, a notice of extraordinary redemption of the Bonds may be a conditional notice of redemption, delivered not less than 15 days prior to such Mandatory Purchase Date, stating that: (a) such redemption shall be conditioned upon the Trustee's failure to receive, by noon New York City time on the fifth Business Day preceding such Mandatory Purchase Date, the Purchase Price of the Bonds required to be purchased on such Mandatory Purchase Date, and (b) if the full amount of the Purchase Price has been received by the Trustee by noon New York City time on the fifth Business Day preceding such Mandatory Purchase Date, the Bonds shall be purchased pursuant to mandatory tender on such Mandatory Purchase Date rather than redeemed. If the full amount of the Purchase Price has been received by the Trustee by noon New York City time on the fifth Business Day preceding such Mandatory Purchase Date, the Trustee shall withdraw such conditional notice of redemption prior to such Mandatory Purchase Date.

With respect to any notice of optional redemption of Bonds, unless upon the giving of such notice such Bonds will be deemed to have been paid under the Indenture, such notice must state that such redemption will be conditioned upon the receipt by the Trustee on or prior to the date fixed for such redemption of money sufficient to pay the Redemption Price of and interest on the Bonds to be redeemed, and that if such money shall not have been so received said notice will be of no force and effect, and NCEA will not be required to redeem such Bonds. In the event that such notice of redemption contains such a condition and such money is not so received, the redemption will not be made and the Trustee must within a reasonable time thereafter give notice, in the manner in which the notice of redemption was given, that such money was not so received and that such redemption was not made.

Effect of Redemption. On any redemption date, the Redemption Price of each Bond to be redeemed, together with the accrued interest thereon to such date, will become due and payable, and from and after such date, notice having been given and moneys available solely for such redemption being on deposit with the Trustee in accordance with the provisions of the Indenture governing redemption of such Bonds, then, notwithstanding that any Bonds called for redemption may not have been surrendered, no further interest will accrue on any of such Bonds. From and after such date of redemption (such notice having been given and moneys available solely for such redemption being on deposit with the Trustee), the Bonds to be redeemed will not be deemed to be Outstanding under the Indenture.

Partial Redemption of Bonds. If less than all of the Bonds of like maturity and Series are called for redemption, such Bonds or portions of Bonds must be redeemed in increments of Authorized Denominations, and such increments to be called for redemption must be selected by lot in such manner as the Trustee determines (subject to the rules and procedures of DTC, as the Securities Depository). Upon surrender of any Bond called for redemption in part only, NCEA must execute, and the Trustee must authenticate and deliver to the Holder thereof, a new Bond or Bonds of Authorized Denominations and the same series and maturity in an aggregate principal amount equal to the unredeemed portion of the Bond surrendered.

BOOK-ENTRY SYSTEM

The Bonds will be initially issued in book-entry only form through the facilities of DTC. The Bonds will be transferable and exchangeable as set forth in the Indenture and, when issued, will be registered in the name of Cede & Co., as nominee of DTC. DTC will act as securities depository for the Bonds. So long as Cede & Co. is the registered owner of the Bonds, principal of and premium, if any, and interest on the Bonds are payable by wire transfer by the Trustee to Cede & Co., as nominee for DTC, which, in turn, will remit such amounts to DTC participants for subsequent disbursement to the Beneficial Owners. See APPENDIX G—“BOOK-ENTRY SYSTEM.”

REVENUES AND DEBT SERVICE REQUIREMENTS

The following table shows for each bond year during the Interest Rate Reset Period (a) the expected Revenues of the Commodity Project (net of receipts and payments under the NCEA Commodity Swap), (b) the Debt Service requirements on the Bonds, (c) the expected Operating Expenses of the Commodity Project (excluding payments under the NCEA Commodity Swap), and (d) the resulting surplus funds to NCEA.

YEAR ENDING APRIL 1	ESTIMATED REVENUES			DEBT SERVICE			OPERATING EXPENSES ⁵	SURPLUS
	COMMODITY SALES ¹	INTEREST EARNINGS ²	OTHER AMOUNTS ³	TOTAL	PRINCIPAL ⁴	INTEREST		

TOTAL

- 1 Commodity Sales includes payments received by NCEA under the Commodity Supply Contract and net receipts/payments under the NCEA Commodity Swap.
- 2 Available interest earnings under the Investment Agreement.
- 3 Other Amounts consists of total reserve amounts, remaining commodity value and required balances in the Debt Service Account.
- 4 Principal due in 20__ includes amount due at scheduled maturity and on the Mandatory Purchase Date.
- 5 Estimated Operating Expenses (excludes Commodity Swap Payments and any Rebate Payments).

As of the Mandatory Purchase Date, \$_____ principal amount of the Bonds will remain outstanding, and is required to be purchased pursuant to mandatory tender.

THE COMMODITY PURCHASE AGREEMENT

Set forth below is a summary of certain provisions of the Commodity Purchase Agreement relating to (i) the purchase and sale of natural gas during the Gas Delivery Period and (ii) the purchase and sale of electricity during the Electricity Delivery Period, if any. This summary does not purport to be a complete description of the terms and conditions of the Commodity Purchase Agreement and accordingly is qualified by reference to the full text thereof.

PURCHASE AND SALE

Under the Commodity Purchase Agreement, the Commodity Supplier agrees to deliver specified daily quantities of natural gas each month during the Gas Delivery Period at a fixed price, and NCEA has agreed to make a lump sum advance payment to the Commodity Supplier for all of the cost of the gas to be delivered during the Gas Delivery Period (as well as the electricity to be delivered during the Electricity Delivery Period). The total quantity of gas to be delivered by the Commodity Supplier during the Gas Delivery Period is expected to be approximately [] million MMBtu.

On the Switch Date, deliveries of gas under the Commodity Purchase Agreement will cease, and deliveries of electricity will commence. NCEA may elect to have the Switch Date occur any time on or after June 1, 2028.

DELIVERY OF GAS

During the Gas Delivery Period, the Commodity Supplier is required to deliver fixed, pre-determined quantities of gas at the primary delivery point specified in the Commodity Purchase Agreement or to an alternate delivery point mutually agreed to by the Commodity Supplier, NCEA and the Project Participant. The Contract Quantity of gas required to be delivered on each day during the term of the Gas Delivery Period matches the Contract Quantity of gas that NCEA has agreed to deliver to the Project Participant under the Commodity Supply Contract. The approximate aggregate monthly quantities of gas to be delivered under the Commodity Purchase Agreement during the Gas Delivery Period range from a high of approximately 1.1 million MMBtu of gas in some months to no gas in other months.

DELIVERY OF ELECTRICITY

During each hour during the Electricity Delivery Period, the Commodity Supplier is required to deliver fixed Hourly Quantities of electricity at the primary delivery point or one of the secondary delivery points specified in the Commodity Purchase Agreement or to an alternate delivery point mutually agreed to by the Commodity Supplier, NCEA and the Project Participant. The Hourly Quantity of electricity required to be delivered on each day during the term of the Electricity Delivery Period matches the Hourly Quantity of electricity that NCEA has agreed to deliver to the Project Participant under the Commodity Supply Contract.

As of the beginning of the Electricity Delivery Period, the Project Participant may assign one or more Assigned PPAs to J. Aron pursuant to PPA Assignment Agreements. During each month that an Assigned PPA is in effect, the Commodity Supplier agrees to deliver and NCEA agrees to take the Assigned Prepay Quantity of Assigned Electricity. Delivery, scheduling and transmission of Assigned Electricity, and title to and risk of loss of Assigned Electricity will be as provided in the applicable Assigned PPA and the applicable Assignment Agreement.

The Assigned Prepay Quantity is generally the “P99” output of the generating project that supplies an Assigned PPA or such lesser amount as may be determined pursuant to the provisions of the Commodity Supply Contract. If the quantity of Assigned Electricity that is delivered under an Assigned PPA exceeds the Assigned Prepay Quantity in any month (such excess being referred to as the “Assigned PAYGO Amount”), NCEA will pay the Commodity Supplier an amount equal to the quantity of the Assigned PAYGO Amount multiplied by the contract price under the Assigned PPA. If the quantity of Assigned Electricity that is delivered under an Assigned PPA is less than the Assigned Prepay Quantity in any month for any reason other than *force majeure*, NCEA will be deemed to have requested the Commodity Supplier to remarket the portion of the Contract Quantity not delivered. The Commodity Supplier will sell such portion in a private business use sale will pay NCEA the product of (a) the portion of the Contract Quantity not delivered and (b) the Contract Specified Price minus the applicable Remarketing Fee. All such sales made by the Commodity Supplier will be entered on the private business sales ledger that is maintained pursuant to the Commodity Purchase Agreement. See “Commodity Remarketing” below.

[*PPA Payment Custodial Agreement.* The Project Participant, J. Aron, the Commodity Supplier, NCEA and Computershare Trust Company, N.A., as custodian (in such capacity, the “Custodian”) have entered into a custodial agreement (the “PPA Payment Custodial Agreement”) to administer payments to be received by the sellers of Assigned Electricity pursuant to the Assigned PPAs (the “PPA Sellers”). The PPA Payment Custodial Agreement is not pledged as part of the Trust Estate.]

FAILURE TO DELIVER OR RECEIVE COMMODITIES

Because NCEA will have prepaid for all of the natural gas and electricity to be delivered under the Commodity Purchase Agreement, the Commodity Supplier will be required to pay NCEA for all Commodities that the Commodity Supplier fails to deliver or NCEA fails to receive for any reason, including events of *force majeure*. The amount the Commodity Supplier is required to pay is equal to the quantity that was not delivered or received multiplied by a price that is determined in a manner depending upon the reason for such failure:

- If the Commodity Supplier breaches its obligation to deliver gas or electricity (*i.e.*, for reasons other than *force majeure* or action or inaction by NCEA), NCEA shall exercise Commercially Reasonable Efforts to purchase Replacement Gas during the Gas Delivery Period or Replacement Electricity during the Electricity Delivery Period, and the Commodity Supplier is required to pay the higher of (a) the replacement costs incurred by NCEA or the Project Participant to purchase replacement gas or electricity, including in some instances replacement gas purchased after the fact to replace any stored gas that was used to cover the delivery shortfall, or (b) the Monthly Index Price during the Gas Delivery Period or the Day-Ahead Market Price during the Electricity Delivery Period, plus in either case a specified administrative fee of per unit of undelivered gas or electricity. If no replacement gas is actually purchased to cover the delivery shortfall, the Commodity Supplier is required to pay NCEA the Monthly Index Price during the Gas Delivery Period or the Day-Ahead Market Price during the Electricity Delivery Period.
- If NCEA breaches its obligation to take Commodities (*i.e.*, for reasons other than *force majeure* or action or inaction by the Commodity Supplier), the Commodity Supplier is required to pay (a) during the Gas Delivery Period, the lesser of the Monthly Index Price or a daily low market index price, less specified remarketing fees and (b) during the Electricity Delivery Period, the price at which the Commodity Supplier, acting in a Commercially Reasonable manner, resells at the applicable delivery point any electricity not received by NCEA, deducting from such proceeds any (i) costs reasonably incurred by Seller in reselling such electricity and (ii) additional transmission charges, if any, reasonably incurred by the Commodity Supplier in delivering such electricity to the third party purchasers, or at the Commodity Supplier's option, the market price at the applicable delivery point for such electricity not received as determined by the Commodity Supplier in a Commercially Reasonable manner.
- If either the Commodity Supplier fails to deliver Commodities or NCEA fails to receive Commodities due to events of *force majeure*, the Commodity Supplier is required to pay (a) during the Gas Delivery Period, the applicable Index Price and (b) during the Electricity Delivery Period, the applicable Day-Ahead Market Price.

COMMODITY REMARKETING

If the Project Participant is in default under the Commodity Supply Contract or does not require or is unable to receive all or any portion of the Commodities purchased by NCEA under the Commodity Purchase Agreement as a result of (a) Project Participant's decreased gas requirements due to reduced generation requirements during the Gas Delivery Period or (b) decreased demand by Project Participant's retail customers, NCEA agrees to require the Commodity Supplier to remarket to other purchasers all or a specified portion of the

Commodities to be delivered under the Commodity Purchase Agreement by delivering Monthly Remarketing Notices or Daily Remarketing Notices as provided in the Commodity Purchase Agreement. J. Aron has agreed to provide all services necessary for the Commodity Supplier to meet its commodity remarketing obligations under the Commodity Purchase Agreement. See “THE COMMODITY SALE AND SERVICE AGREEMENT — J. Aron as Agent.”

There are three types of potential remarketing sales when proper notice has been tendered: qualified sales to Municipal Utilities, non-private business use sales and private business use sales. The Commodity Supplier is required to use Commercially Reasonable Efforts to remarket Commodities first in qualified sales and next in non-private business use sales. If the Commodity Supplier is unable to remarket the Commodities designated in a remarketing notice in qualified sales or in non-private business use sales, it will purchase the Commodities. Under the Commodity Sale and Service Agreement, the Commodity Supplier delegates, and J. Aron assumes, all of the Commodity Supplier’s Commodity remarketing obligations under the remarketing provisions of the Commodity Purchase Agreement. See “THE COMMODITY SALE AND SERVICE AGREEMENT— J. Aron as Agent—*Commodity Remarketing*.”

The amounts payable by the Commodity Supplier for Commodities remarketed are the actual sale proceeds or the amounts based on the Index Price, depending on the timing of the notice given by NCEA and the type of remarketing, less specified remarketing fees.

The Commodity Supplier must track in dollar and Commodity unit ledgers information relating to the remarketing proceeds and the quantities of Commodities remarketed, including sales made to the Project Participant and other Municipal Utilities, to non-private business users and to private business users. NCEA will seek to make additional qualified sales, and the Commodity Supplier will seek to locate opportunities for NCEA to purchase Commodities to sell in additional qualified sales, in each case to reduce the ledger amounts associated with non-private and private business use sales.

Assigned Electricity. If the quantity of Assigned Electricity that is delivered under an Assigned PPA is less than the Assigned Prepay Quantity in any month for any reason other than *force majeure*, NCEA will be deemed to have requested the Commodity Supplier to remarket the portion of the Contract Quantity not delivered. The Commodity Supplier will sell such portion in a private business use sale and will pay NCEA the product of (a) the portion of the Contract Quantity not delivered and (b) the Contract Specified Price minus the applicable Remarketing Fee. All such sales made by the Commodity Supplier will be entered on the private business sales ledger that is maintained pursuant to the Commodity Purchase Agreement.

LEDGER EVENT

The Commodity Supplier is required to use Commercially Reasonable Efforts to remarket gas first in Qualified Sales and next in Non-Private Business Sales. If the Commodity Supplier is unable to remarket the Commodity designated in a remarketing notice in Qualified Sales or in Non-Private Business Sales, it will purchase the Commodity. To the extent the Commodity Supplier purchases such Commodity or remarkets such Commodity other than in Qualified Sales to Municipal Utilities, NCEA will exercise commercially reasonable efforts to use the proceeds of such remarketing to purchase Commodities for resale in Qualified Sales. The Commodity Supplier may also propose that NCEA use such proceeds to purchase Commodities for sale to Municipal Utilities identified by the Commodity Supplier.

The Commodity Supplier will maintain a ledger set that accounts for private business use remarketing sales of Commodities and non-qualified remarketing sales of Commodities. If there is a remaining balance on the ledger set two years after any remarketing of Commodities in a private business use sale or a non-qualified sale, such balance will count against:

(a) in the case of private business use sales, (i) during the Gas Delivery Period, a limit equal to a quantity of gas that is equal to \$15 million divided by the fixed price per MMBtu under the Commodity Purchase Agreement and (ii) during the Electricity Delivery Period, a quantity of electricity equal to \$15 million divided by the fixed price per MWh under the Commodity Purchase Agreement, and

(b) in the case of non-qualified sales, (i) during the Gas Delivery Period, a limit on the quantity of gas (in MMBtu) equal to 10% of the total quantity of gas to be delivered under the Commodity Purchase Agreement and (ii) during the Electricity Delivery Period, a limit on the quantity of electricity (in MWh) equal to 10% of the total quantity of electricity to be delivered under the Commodity Purchase Agreement,

in each case, subject to any higher amount as may be set forth in an Opinion of Bond Counsel. Each of the above limits apply in the aggregate over the term of the Commodity Purchase Agreement. In the event that any limit is exceeded, a “*Ledger Event*” will occur under the Commodity Purchase Agreement, unless NCEA receives an Opinion of Bond Counsel to the effect that such event will not adversely affect the exclusion from gross income for U.S. federal income tax purposes of interest on the Bonds. Any such Tax Opinion may take into account, among other things, any changes in tax requirements and any remedial actions taken with respect to the Bonds by NCEA. The occurrence of a Ledger Event could cause interest on the Bonds to become subject to federal income taxation, possibly retroactive to their Initial Issue Date.

NCEA has agreed in its Continuing Disclosure Undertaking for the Bonds to provide notices of (a) private business use sales and non-qualified sales of Commodities that are not remediated within twelve months and (b) the occurrence of a Ledger Event. See “CONTINUING DISCLOSURE” below.

A Ledger Event provides the Commodity Supplier (at the sole determination of the director appointed by NCEA) with the option to designate a Commodity Delivery Termination Date under the Commodity Purchase Agreement. [If the Commodity Supplier designates a Commodity Delivery Termination Date as a result of a Ledger Event, [] has the right, but no obligation, to exercise the [] Acceleration Option under the []. The exercise of the [] Acceleration Option is a Termination Payment Event under the Commodity Purchase Agreement. However, a Ledger Event does not, without subsequent actions by the Commodity Supplier and the exercise by the [] of the [] Acceleration Option, result in an Early Termination Payment Date under the Commodity Purchase Agreement.] See “INVESTMENT CONSIDERATIONS—Loss of Tax Exemption on the Bonds.”

Following the occurrence of a Ledger Event, the Commodity Supplier is obligated to pay to NCEA any amounts that become payable by J. Aron to the Commodity Supplier pursuant to the Commodity Sale and Service Agreement as a result of such Ledger Event. See “THE COMMODITY SALE AND SERVICE AGREEMENT—Ledger Event Payments” and “THE BONDS—Increased Interest Rate Upon Ledger Event.”

PAYMENT PROVISIONS

[The additional prepayment from NCEA to the Commodity Supplier will be due prior to the inception of the term of the Commodity Purchase Agreement.] To the extent amounts become payable by the Commodity Supplier (for example, as a result of a remarketing or a failure to deliver by the Commodity Supplier), such amounts are due on the 22nd day of the month following the month in which such amount accrues (or, if later, the tenth day following receipt of an invoice). Amounts payable by NCEA are due on the 25th day of the month following the month in which such amounts accrue (or, if later, the tenth day following receipt of an invoice).

FORCE MAJEURE

Each of NCEA and the Commodity Supplier are excused from their respective obligations to receive and deliver Commodities under the Commodity Purchase Agreement to the extent prevented by *force majeure*, defined generally as an event or circumstance which prevents one party from performing its obligations under the Commodity Purchase Agreement, which event or circumstance was not anticipated as of the date of the execution of the Commodity Purchase Agreement, which is not within the reasonable control of, or the result of the negligence of, the claiming party, and which, by the exercise of due diligence, the claiming party is unable to overcome or avoid or cause to be avoided. This excuse to performance includes such events as natural disasters, unusually extreme or severe weather related events, interruption or curtailment of gas transportation or storage, government actions, and strikes.

ASSIGNMENT

Neither party may assign its rights under the Commodity Purchase Agreement without the other party's consent except:

(a) pursuant to the Indenture, NCEA may transfer, sell, pledge, encumber or assign the Commodity Purchase Agreement to the Trustee in connection with a financing arrangement; *provided* that NCEA may not assign its rights under the Commodity Purchase Agreement unless, contemporaneously with the effectiveness of such assignment, NCEA also assigns the NCEA Commodity Swap and the NCEA Custodial Agreement to the same assignee; and

(b) the Commodity Supplier may assign the Commodity Purchase Agreement to an affiliate of the Commodity Supplier, which assignment shall constitute a novation; *provided* that the assignee agrees to be bound by the terms and conditions of the Commodity Purchase Agreement and (i) the Commodity Supplier delivers a Rating Confirmation to NCEA with respect to such assignment, (ii) contemporaneously with the effectiveness of such assignment, the Commodity Supplier also assigns the Commodity Supplier Commodity Swap, the Commodity Supplier Custodial Agreement and the SPE Master Custodial Agreement to the same assignee and either (A) the Commodity Supplier assigns the Funding Agreement and the Commodity Sale and Service Agreement to the same assignee or (B) the assignee provides to NCEA a guarantee by GSG of the assignee's obligations under the Commodity Sale and Service Agreement, and (iii) the assignee is a special purpose entity approved by NCEA or its obligations under the Commodity Purchase Agreement are guaranteed by a Funding Recipient to the satisfaction of NCEA.

If either (a) the Commodity Supplier notifies NCEA that the Funding Agreement will not be replaced, re-financed or re-priced as of the end of any Interest Rate Period for the Bonds, (b) the Commodity Supplier is unable to provide, under the Re-Pricing Agreement, an estimated Available Discount for any Reset Period that is equal to or greater than the applicable minimum discount under the Commodity Supply Contract or (c) NCEA can provide reasonable evidence that the Commodity Supplier's estimated Reset Period Implied Rate (as defined in the Re-Pricing Agreement) is materially less than the rate the Commodity Supplier would offer to a substantially similar counterparty in an arm's length transaction on the same date, then, at the request of NCEA, the Commodity Supplier will reasonably cooperate with NCEA to cause the Commodity Supplier's (or the Commodity Supplier's affiliate's) right, title and interest in the Commodity Purchase Agreement, the Re-Pricing Agreement, the Commodity Supplier Commodity Swap and all agreements related to any of the foregoing to be novated to a replacement seller. The Commodity Purchase Agreement and the Indenture impose certain requirements for any such novation, including the delivery of a Rating Confirmation.

FUNDING AGREEMENT

Except (a) to cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the Funding Agreement, (b) to insert such provisions clarifying matters or questions arising under the Funding Agreement as are necessary or desirable and are not contrary to or inconsistent therewith or (c) to convert or supplement any provision in a manner consistent with the intent of the Funding Agreement and the other Transaction Documents, the Commodity Supplier agrees in the Commodity Purchase Agreement that it shall not agree to any amendment, alteration, assignment or modification to the Funding Agreement or any guaranty of the Funding Recipient's obligations thereunder without receipt of a Rating Confirmation and the prior written consent of NCEA; *provided that* the consent of NCEA shall not be required in connection with (i) the replacement, refinancing or re-pricing of the Funding Agreement at the end of any Interest Rate Period in accordance with the terms of the Funding Agreement or (ii) the Commodity Supplier's assignment of its interest in the Funding Agreement or consent to Funding Recipient's assignment of its interest in the Funding Agreement to the extent the Commodity Supplier provides a Rating Confirmation to NCEA with respect to any such assignment.

EARLY TERMINATION

A Commodity Delivery Termination Date will occur automatically under the Commodity Purchase Agreement upon the occurrence of a Termination Payment Event (which includes a Failed Remarketing with respect to the Bonds) or an Automatic Commodity Delivery Termination Event (as such terms are described below). Upon the occurrence of an Optional Commodity Delivery Termination Event (as described below), a Commodity Delivery Termination Date may be designated by the Commodity Supplier, as described below. If a Commodity Delivery Termination Date occurs, the Delivery Period under the Commodity Purchase Agreement will end and, if the Commodity Delivery Termination Date occurs as a result of a Termination Payment Event, the Commodity Supplier will be required to make the payment or payments described under "Remedies and Termination" below.

Termination Payment Event. A Termination Payment Event will occur under the Commodity Purchase Agreement if:

- [• the exercise by the Funding Recipient of the Funding Recipient Acceleration Option;]
- [• the exercise by the Commodity Supplier of the Commodity Supplier Acceleration Option;]
- the Commodity Supplier fails to pay when due any amounts owed to NCEA under the Commodity Purchase Agreement because of a failure by the Funding Recipient to pay when due any amounts owed to the Commodity Supplier pursuant to the Funding Agreement and such failure continues for 30 days after NCEA gives notice thereof to the Commodity Supplier;
- as of three Business Days prior to the last day of exchange trading for Henry Hub Natural Gas Futures Contracts on the New York Mercantile Exchange (or successor thereto) for deliveries in the first month following a Reset Period, either (a) NCEA has not entered into a bond purchase agreement, firm remarketing agreement or similar agreement with respect to the remarketing or refunding of the Bonds or (b) the Commodity Supplier is unable to replace, refinance or re-price the Funding Agreement for a subsequent Reset Period;
- a Failed Remarketing occurs; or
- both (a) the Project Participant makes a Remarketing Election for a Reset Period, and (b) J. Aron exercises its option to designate a CSSA Early Termination Date under the Commodity Sale and Service Agreement.

Optional Commodity Delivery Termination Events. The Commodity Supplier will have the right to designate a Commodity Delivery Termination Date under the Commodity Purchase Agreement under the following circumstances:

- a Ledger Event occurs; or
- except in the case where an Automatic Commodity Delivery Termination Event has occurred, both (a) an early termination date under the NCEA Commodity Swap is designated by the Commodity Swap Counterparty or occurs automatically based on a termination event where NCEA is the sole affected party and (b) either the NCEA Commodity Swap or the Commodity Supplier Commodity Swap is not replaced within the Swap Replacement Period.

Automatic Commodity Delivery Termination Events. A Commodity Delivery Termination Date will occur automatically, that will not result on its own as a Termination Payment Event, under the Commodity Purchase Agreement under the following circumstances:

- following receipt of an offer by the Trustee to sell Swap Call Receivables under the Receivables Purchase Provisions, the Commodity Supplier does not exercise (or is deemed not to have exercised) its related option to purchase Swap Call Receivables within the timeline set forth in the Receivables Purchase Provisions;

- both (a) a CSSA Early Termination Date occurs under the Commodity Sale and Service Agreement, and (b) the Commodity Supplier is unable to enter into a replacement Commodity Sale and Service Agreement in compliance with the requirements of the Commodity Purchase Agreement by the date that is 120 days following such early termination date;
- an early termination date under the NCEA Commodity Swap is designated by the Commodity Swap Counterparty based on an event of default due to NCEA's insolvency or bankruptcy; or
- both (a) an early termination date under the Commodity Supplier Commodity Swap is designated by the Commodity Swap Counterparty based on an event of default where the Commodity Supplier is the defaulting party or a termination event where the Commodity Supplier is the sole affected party, or otherwise occurs automatically and (b) except for certain events of default and termination events for which the Swap Replacement Period does not apply, either the Commodity Supplier Commodity Swap or the NCEA Commodity Swap is not replaced within the Swap Replacement Period.

REPLACEMENT OF COMMODITY SWAPS

NCEA and the Commodity Supplier agree in the Commodity Purchase Agreement that if any Commodity Swap terminates, is being terminated or is expected to be terminated, in each case for any reason other than the insolvency of NCEA or the Commodity Supplier or the failure of the Commodity Supplier to make payments or post collateral due under the Commodity Supplier Commodity Swap, then:

(a) (i) if an NCEA Commodity Swap and a Commodity Supplier Commodity Swap with another Commodity Swap Counterparty are in effect and are not subject to termination, NCEA and the Commodity Supplier will exercise any rights they may have to increase their notional quantities thereunder in order to replace the Commodity Swap affected by the events described above and the other Commodity Swap and (ii) subsequent to such a replacement, NCEA and the Commodity Supplier will cooperate in good faith to locate replacement agreements with a second Commodity Swap Counterparty and, upon locating such second Commodity Swap Counterparty, NCEA and the Commodity Supplier will reduce their notional quantities under the remaining Commodity Swaps to their original levels and enter into replacement Commodity Swaps with the replacement Commodity Swap Counterparty for the remaining notional quantities; and

(b) if NCEA and the Commodity Supplier cannot increase the notional quantities of the Commodity Swaps as described in (a) above, they will cooperate in good faith to locate replacement agreements with an alternate Swap Counterparty to replace both of the Commodity Swaps within the Swap Replacement Period.

The "*Swap Replacement Period*" is the period that begins on the earlier of the date of (x) any termination of the NCEA Commodity Swap or the Commodity Supplier Swap designated by the Commodity Swap Counterparty and (y) delivery of a notice of anticipated termination of the NCEA Commodity Swap or the Commodity Supplier Swap by a Swap Counterparty, and ends 60 days later.

REMEDIES AND TERMINATION PAYMENT

Commodity Delivery Termination Date. A Commodity Delivery Termination Date will occur automatically upon the occurrence of a Termination Payment Event or an Automatic Commodity Delivery Termination Event. If an Optional Commodity Delivery Termination Event has occurred and is continuing, then the Commodity Supplier, as described above, may designate a Commodity Delivery Termination Date.

End of Delivery Period. As of the Commodity Delivery Termination Date:

- (a) the Delivery Period will end;
- (b) the obligation of NCEA to receive deliveries of Commodities will terminate; and
- (c) the obligation of the Commodity Supplier to make any further deliveries of Commodities will terminate and, unless such Commodity Delivery Termination Date resulted from a Termination Payment Event, will be replaced with a continuing obligation of the Commodity Supplier to pay scheduled monthly amounts to NCEA until the earlier of (i) the Month in which a Termination Payment Event occurs and (ii) the last due date for such scheduled payments; and

The Commodity Purchase Agreement will continue in effect after the Commodity Delivery Termination Date occurs. The occurrence of a Commodity Delivery Termination Date will not prevent the contemporaneous or subsequent occurrence of a Termination Payment Event.

Termination Payment; Early Termination Payment Date. Following a Termination Payment Event, the Commodity Supplier is required to pay the Termination Payment to the Trustee on the Early Termination Payment Date. The “Early Termination Payment Date” is the last Business Day of the first Month that commences after a Termination Payment Event occurs. In the case of a Termination Payment Event that results from a Failed Remarketing, the Early Termination Payment Date will be the last Business Day of the current Interest Rate Period. The obligation of the Commodity Supplier to pay the Termination Payment on the Early Termination Payment Date is unconditional, and the Commodity Supplier waives all rights to set-off, counterclaim, recoupment and any other defenses that might otherwise be available with regard to its obligation to pay the Termination Payment on the Early Termination Payment Date.

The amount of the Termination Payment is set forth on a schedule to the Commodity Purchase Agreement. The Termination Payment payable by the Commodity Supplier, together with the amounts required to be on deposit in certain Funds and Accounts held by the Trustee, has been calculated to provide a sum at least sufficient to pay the Redemption Price of the Bonds, assuming that the Funding Recipient, the Project Participant, the Commodity Supplier and the Investment Agreement Provider pay and perform their respective contract obligations when due. If the Debt Service Reserve Account is depleted due to payment defaults by the Project Participant and is not timely replenished, the Termination Payment and the other available funds held under the Indenture will likely not be adequate to redeem the Bonds in full. See APPENDIX I for a schedule of the Termination Payment as of specified Early Termination Payment Dates under the Commodity Purchase Agreement.

RECEIVABLES PURCHASE PROVISIONS

Under certain circumstances, the Commodity Supplier has agreed to purchase from NCEA the rights to payment of net amounts owed by the Project Participant (“*Swap Call Receivables*”) under the Commodity Supply Contract.

Swap Call Receivables. If the Project Participant defaults on its obligation to make any payment under the Commodity Supply Contract, and such nonpayment results in a Swap Payment Deficiency, then on the next succeeding Business Day, NCEA shall deliver a written offer (a “*Swap Call Receivables Offer*”) to sell to the Commodity Supplier sufficient Swap Call Receivables (such amount, less any undisputed amounts owed by NCEA to the Project Participant under the Commodity Supply Contract, the “*Swap Call Receivables Amount*”) to fund such Swap Payment Deficiency. No later than one Business Day following the Commodity Supplier’s receipt of a Swap Call Receivables Offer, the Commodity Supplier may elect, in its discretion, to purchase the Swap Call Receivables referenced in the Swap Call Receivables Offer by delivering a written notice (a “*Call Option Notice*”) to NCEA of the Commodity Supplier’s intent to purchase such Swap Call Receivables. If the Commodity Supplier does not deliver a Call Option Notice to NCEA on or before the Business Day following the Commodity Supplier’s receipt of a Swap Call Receivables Offer, the Commodity Supplier will be deemed to have elected not to purchase the referenced Swap Call Receivables, which constitutes an Automatic Commodity Delivery Termination Event under the Commodity Purchase Agreement.

Elective Call Receivables. If the Project Participant defaults on its obligation to make any payment under its Commodity Supply Contract with PEAK and such payment default does not result in a Swap Payment Deficiency, the Trustee shall deliver a written offer (an “*Elective Call Receivables Offer*”) to sell to the Commodity Supplier the receivables relating to such payment default (“*Elective Call Receivables*” and, together with Swap Call Receivables, “*Call Receivables*”). Any time after the Commodity Supplier’s receipt of an Elective Call Receivables Offer, the Commodity Supplier may elect, in its discretion, to purchase the Elective Call Receivables referenced in the Elective Call Receivables Offer by delivering a written notice to the Trustee of the Commodity Supplier’s intent to purchase such Elective Call Receivables. The election by the Commodity Supplier not to purchase Swap Call Receivables is **not** an Automatic Commodity Delivery Termination Event under the Commodity Purchase Agreement.

Conditions to Purchase and Sale of Call Receivables. NCEA’s obligation to offer to sell such Call Receivables is subject to the condition that all of the representations and warranties made by the Commodity Supplier at the time of execution and delivery of the Receivables Purchase Provisions be true and correct on each day that the Trustee is required to offer to sell Call Receivables.

Call Receivables Purchase by J. Aron. Under the Commodity Sale and Service Agreement, J. Aron has agreed to purchase any Call Receivable purchased by the Commodity Supplier under the Receivables Purchase Provisions; provided that J. Aron’s obligation to purchase Call Receivables is subject to it having provided its prior written consent to the purchase of such Call Receivables by the Commodity Supplier. See “THE COMMODITY SALE AND SERVICE AGREEMENT.”

THE RE-PRICING AGREEMENT

Set forth below is a summary of certain provisions of the Re-Pricing Agreement. This summary does not purport to be a complete description of the terms and conditions of the Re-Pricing Agreement and accordingly is qualified by reference to the full text thereof.

GENERAL

The Re-Pricing Agreement provides for (a) the determination of delivery periods (“Reset Periods”) subsequent to the Reset Period that corresponds to the Interest Rate Reset Period on the Bonds and the calculation of the amount of the discount (in cents per Commodity Unit) that is available (the “Available Discount”) for sales of Commodities to the Project Participant during each Reset Period.

“Commodity Unit” means [one MMBtu of gas or one MWh of electricity, as applicable]. [NTD: “Commodity Unit” needs to be defined.]

The Reset Period under the Commodity Purchase Agreement that corresponds to the Interest Rate Reset Period begins on the first day of _____ 20__ and ends on the last day of _____ 20__ and the next Reset Period is expected to begin on the first day of _____ 20__.

REMARKETING ELECTION

In the event that the Available Discount for any Reset Period is less than the minimum discount specified in the Commodity Supply Contract (which includes both monthly discounts and any annual refunds), the Project Participant may elect not to take Commodities during the Reset Period and to have such Commodities remarketed for the duration of the Reset Period (a “Remarketing Election”) by giving notice of such election to NCEA, the Commodity Supplier and NCEA. Any Commodities that are covered by a Remarketing Election will be remarketed in accordance with the provisions of the Indenture and the Commodity Purchase Agreement. In the event that the Project Participant makes a Remarketing Election with respect to a Reset Period, J. Aron will have the option to terminate the Commodity Sale and Service Agreement. If J. Aron exercises this option, a Termination Payment Event and an Early Payment Termination Date will occur under the Commodity Purchase Agreement. See “THE RE-PRICING AGREEMENT” and “THE COMMODITY PURCHASE AGREEMENT — Remarketing” and “— Early Termination.” [NTD: Above description does not match the CSSA which retains the “50% of Contract Quantities” phrasing for the termination option.]

REPLACEMENT OF FUNDING AGREEMENT

The Re-Pricing Agreement includes provisions that enable the Commodity Supplier to obtain proposals from the Funding Recipient and other qualified funding providers for funding agreements to replace the Funding Agreement upon the maturity date of the Funding Agreement (which coincides with the end of the Interest Rate Reset Period). NCEA agrees to cooperate in good faith with the Commodity Supplier and to take all steps reasonably within its control to cause the Bonds to be remarketed or refunded for the Interest Rate Period that corresponds to each Reset Period.

THE COMMODITY SALE AND SERVICE AGREEMENT

Set forth below is a summary of certain provisions of the Commodity Sale and Service Agreement. This summary does not purport to be a complete description of the terms and conditions of the Commodity Sale and Service Agreement and accordingly is qualified by reference to the full text thereof.

GENERAL

Under the Commodity Sale and Service Agreement, J. Aron has agreed to sell and deliver the Contract Quantity of Commodities each gas day during the Gas Delivery Period and each delivery hour during the Electricity Delivery Period, as applicable, in exchange for payment from the Commodity Supplier of an amount equal to the applicable Index Price for the delivery point set forth in the Commodity Sale and Service Agreement, plus any price differential for the delivery point, plus a specified fee per Commodity Unit (the “*J. Aron Commodity Fee*”), regardless of whether or not such Commodities are delivered pursuant to the terms and conditions of the Commodity Sale and Service Agreement. The daily quantities of gas, hourly quantities of electricity, delivery point provisions and delivery period under the Commodity Sale and Service Agreement match the corresponding provisions of the Commodity Purchase Agreement and, in turn, the corresponding provisions of the Commodity Supply Contract. In addition to the J. Aron Commodity Fee, the Commodity Supplier agrees to pay a structuring fee on the effective date of the Commodity Sale and Service Agreement in consideration of its services in connection with the arrangement, establishment, hedging and funding of the Commodity Project.

J. ARON AS AGENT

General. Under the Commodity Sale and Service Agreement, the Commodity Supplier appoints and directs J. Aron as its agent and J. Aron agrees to issue notices and other communications, billing statements and to take any other actions that the Commodity Supplier is required or permitted to take under (a) the Commodity Purchase Agreement, (b) the Commodity Supplier Commodity Swap, (c) the Re-Pricing Agreement, and (d) the Commodity Sale and Service Agreement (collectively, the “*Commodity Documents*”); provided that J. Aron’s agency role with respect to the Commodity Sale and Service Agreement shall be limited to ordinary course actions required in connection with the Commodity Project and J. Aron shall have no right to waive, modify or amend the terms of the Commodity Sale and Service Agreement on the Commodity Supplier’s behalf or to act on the Commodity Supplier’s behalf with respect to any dispute thereunder. In exercising this agency power, J. Aron shall have the authority to take any such actions as it deems necessary under the Commodity Documents.

Standard of Care. In the conduct and performance of its agency role, J. Aron shall conduct itself consistent with and observe the same standard of care as it has in similar transactions in which J. Aron has acted as the seller under prepaid natural gas and commodities agreements, and the Commodity Supplier acknowledges and agrees that J. Aron shall have no obligation to observe a standard of care greater than it has in such similar transactions or to take any actions or measures beyond those it typically takes in connection with such transactions. J. Aron shall not be liable for any action taken or omitted by it in acting as agent on behalf of the Commodity Supplier, except as expressly set forth in the Commodity Sale and Service Agreement.

Commodities Remarketing. Under the Commodity Sale and Service Agreement, the Commodity Supplier delegates, and J. Aron assumes, all of the Commodity Supplier’s Commodities remarketing obligations under the remarketing provisions of the Commodity Purchase Agreement [(subject to certain limitations set forth

therein)], and J. Aron agrees to comply with such provisions. Pursuant to this delegation, all Commodities remarketing notices, directions and other actions will be given to or by, and will be performed by, J. Aron, except as described below.

Call Receivables Purchase. J. Aron agrees in the Commodity Sale and Service Agreement to purchase any Call Receivable purchased by the Commodity Supplier under the Receivables Purchase Provisions. J. Aron accordingly has the right in its sole discretion to direct the Commodity Supplier on the exercise of its right to purchase Call Receivables. J. Aron agrees to accept the transfer of Call Receivables as a credit against amounts owed by the Commodity Supplier under the Commodity Sale and Service Agreement and, to the extent that the amount of such Call Receivables exceeds the amount so owed by the Commodity Supplier in any Month, J. Aron will pay the difference to the Commodity Supplier. J. Aron agrees to pay the purchase price for Call Receivables not later than the applicable purchase date specified in the Receivables Purchase Provisions by wire transfer of immediately available funds.

FAILURE TO DELIVER OR RECEIVE COMMODITIES

J. Aron will be required to pay the Commodity Supplier for all Commodities that J. Aron fails to deliver or the Commodity Supplier fails to receive for any reason, including events of *force majeure*. The amount J. Aron is required to pay the Commodity Supplier is equal to the amount the Commodity Supplier is required to pay NCEA for Commodities not delivered or received under the Commodity Purchase Agreement.

PAYMENT PROVISIONS

Amounts due from J. Aron to the Commodity Supplier under the Commodity Sale and Service Agreement (for example, as a result of remarketing or failure to deliver by J. Aron) will be due on or before the 22nd day of the month following the month in which such amount accrues (or, if later, the tenth day following receipt of an invoice); *provided that* the purchase price of any Call Receivables purchased by J. Aron shall be paid on the applicable purchase date under the Receivables Purchase Provisions. Amounts due from the Commodity Supplier to J. Aron will be due on or before the 26th day of the month following the month in which such amount accrued (or, if later, the 10th day following receipt of an invoice). J. Aron is not entitled to net amounts due and owing by it under the Commodity Sale and Service Agreement, but the Commodity Supplier is entitled to net any amounts due and owing by J. Aron against its monthly payments due to J. Aron.

FORCE MAJEURE

Each of the Commodity Supplier and J. Aron are excused from their respective obligations to receive and deliver Commodities under the Commodity Sale and Service Agreement to the extent prevented by *force majeure*, defined generally as any cause not within the reasonable control of the party claiming an excuse to its obligations. This excuse to performance includes such events as natural disasters, unusually extreme or severe weather related events, interruption or curtailment of gas transportation or storage, government actions, and strikes.

LEDGER EVENT PAYMENTS

If a Ledger Event occurs under the Commodity Purchase Agreement and (i) [Commodity Supplier/Funding Recipient] has not exercised the [Commodity Supplier/Funding Recipient] Acceleration Option and (ii) an Early Termination Payment Date has not otherwise occurred or been designated thereunder, J. Aron agrees to pay to the Commodity Supplier scheduled Ledger Event Payments calculated to provide a sum sufficient (together with the interest component of the Scheduled Debt Service Deposits) to enable NCEA to pay interest on the Bonds at the Increased Interest Rate. Such payments are due to the Commodity Supplier on (a) the Business Day preceding each Interest Payment Date and the Mandatory Purchase Date, and (b) any Early Termination Payment Date under the Commodity Purchase Agreement. See “THE COMMODITY PURCHASE AGREEMENT — Ledger Event” and “THE BONDS — Increased Interest Rate Upon Ledger Event.”

ASSIGNMENT

Neither party may assign its rights or obligations under the Commodity Sale and Service Agreement without the other party’s consent, except that J. Aron may assign the Commodity Sale and Service Agreement to an affiliate of J. Aron, which assignment will constitute a novation; *provided* that (a) the CSSA Guaranty continues to apply to the obligations of such assignee under the Commodity Sale and Service Agreement or (b) the assignee delivers to the Commodity Supplier a Rating Confirmation with respect to such assignment.

DEFAULTS AND TERMINATION EVENTS

J. Aron Default. Each of the following events constitutes a “*J. Aron Default*” under the Commodity Sale and Service Agreement:

- (a) J. Aron fails to pay when due any amounts owed to the Commodity Supplier pursuant to the Commodity Sale and Service Agreement and such failure continues for five days after receipt by J. Aron of notice thereof, unless GSG has made such payment under the CSSA Guaranty;
- (b) certain bankruptcy or insolvency events with respect to J. Aron; or
- (c) the CSSA Guaranty ceases to be in full force and effect or is declared to be null and void, or GSG contests the validity or enforceability of the CSSA Guaranty; provided that no such event will occur as a consequence of GSG becoming subject to a receivership, insolvency, liquidation, resolution or similar proceeding.

Commodity Supplier Default. Each of the following events constitutes a “*Commodity Supplier Default*” under the Commodity Sale and Service Agreement:

- (a) the Commodity Supplier fails to pay when due any amounts owed to J. Aron pursuant to the Commodity Sale and Service Agreement and such failure continues for thirty Business Days after receipt by the Commodity Supplier of notice thereof; or
- (b) certain bankruptcy or insolvency events with respect to the Commodity Supplier.

Optional Non-Default Termination Event. Each of the following events constitutes an “Optional Non-Default Termination Event” under the Commodity Sale and Service Agreement:

- (a) the Commodity Supplier has the option to terminate the Commodity Sale and Service Agreement during the Gas Delivery Period if a “*Persistent Delivery Failure*” occurs as a result of;
 - (i) J. Aron failing to deliver any gas for 12 consecutive gas days at all delivery points;
 - (ii) J. Aron delivering less than 50% of all gas required to be delivered at all delivery points on any 45 consecutive gas days; or
 - (iii) J. Aron delivering less than 85% of all gas required to be delivered at all delivery points on any 180 gas days (consecutive or non-consecutive) during any period of 365 consecutive days; or
- (b) J. Aron has the option to terminate the Commodity Sale and Service Agreement if the Commodity Supplier provides that the Project Participant has made a Remarketing Election for any Reset Period (a “*GSC Remarketing Event*”). [NTD: See note on p. 48.]

Automatic Commodity Delivery Termination Event. The occurrence of a Commodity Delivery Termination Date under the Commodity Purchase Agreement constitutes an “*Automatic Commodity Delivery Termination Event*” under the Commodity Sale and Service Agreement.

REMEDIES AND TERMINATION

Upon the occurrence of a J. Aron Default or a Commodity Supplier Default, the non-defaulting party may designate an early termination date under the Commodity Sale and Service Agreement (a “*CSSA Early Termination Date*”). Upon the occurrence of an Optional Non-Default Termination Event due to a Persistent Delivery Failure, the Commodity Supplier may designate a CSSA Early Termination Date. Upon the occurrence of an Optional Non-Default Termination Event due to a GSC Remarketing Event, J. Aron may designate a CSSA Early Termination Date. A CSSA Early Termination Date will occur automatically upon the occurrence of a Commodity Delivery Termination Date under the Commodity Purchase Agreement.

If a Commodity Delivery Termination Date occurs, the Delivery Period for gas under the Commodity Sale and Service Agreement will end and the obligations of the parties to deliver and receive gas will terminate.

SECURITY

GSG has provided to the Commodity Supplier a guaranty of J. Aron’s payment obligations under the Commodity Sale and Service Agreement (the “*CSSA Guaranty*”). None of NCEA, the Trustee or the Bondholders have rights to enforce the CSSA Guaranty.

GSG, J. ARON AND THE COMMODITY SUPPLIER

Set forth below is certain information regarding GSG, J. Aron and the Commodity Supplier that has been obtained from such persons and other sources believed to be reliable. NCEA assumes no responsibility for such information and cannot guarantee the accuracy thereof. Under no circumstance is the Commodity Supplier, J. Aron or GSG obligated to pay any amounts owed in respect of the Bonds.

GSG

GSG, together with its consolidated subsidiaries, is a leading global financial institution that delivers a broad range of financial services across investment banking, securities, investment management and consumer banking to a large and diversified client base that includes corporations, financial institutions, governments and individuals. Founded in 1869, the firm is headquartered in New York and maintains offices in all major financial centers around the world.

GSG is a public company that is subject to the information requirements of the Securities Exchange Act of 1934, as amended, and in accordance therewith files reports, proxy statements and other information, including financial reports, with the Securities and Exchange Commission (the “SEC”). For further information concerning GSG and J. Aron, see:

- GSG’s Annual Report on Form 10-K for the fiscal year ended December 31, 2023;
- GSG’s Current Reports on Form 8-K (i) dated and filed on January 16, 2024, (ii) dated January 12, 2024 and filed on January 19, 2024 and (iii) dated and filed on February 16, 2024; and
- All documents filed by GSG under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 on or after the date of this Official Statement and prior to the date of the issuance of the Bonds.

[NTD: Update prior to posting.]

These reports and other information are available for review at <http://www.sec.gov>, an internet site maintained by the SEC.

The senior unsecured long-term debt of GSG is rated “A” (stable outlook) by Fitch, “A2” (stable outlook) by Moody’s and “BBB+” (stable outlook) by S&P.

GSG has provided to the CSSA Guaranty to the Commodity Supplier, which guarantees of J. Aron’s payment obligations under the Commodity, Sale and Service Agreement. None of NCEA, the Trustee nor the Bondholders have rights to enforce the CSSA Guaranty.

J. ARON

J. Aron, a participant in the commodities business for over 100 years, was acquired in 1981 by Goldman Sachs, and is the entity through which Goldman Sachs executes its commodities business. J. Aron is a registered

swap dealer and market-maker for a wide array of commodities and commodity derivative contracts relating to diesel, oil, natural gas, gasoline, jet fuel, other petroleum products, power, metals, and soft commodities, among others.

According to Platts Gas Daily, J. Aron was the seventeenth largest marketer of physical natural gas in North America during the second quarter of 2022 at 3.24 Bcf/day. Since 2006, J. Aron has executed more than thirty energy prepayment transactions with municipal utilities and joint action agencies. As of January 1, 2023, it is contractually committed to deliver over 550,000 MMBtu/day of physical gas supplies in the aggregate to approximately 400 municipal utilities at over 40 delivery points under these transactions.

J. Aron has market based rate authority from FERC for energy, capacity and ancillary services sales at market-based rates. Since 2006, J. Aron has executed more than thirty commodity prepayment transactions with municipal utilities and joint action agencies. Since 2018, J. Aron has enabled more than 2,000 MWs of renewable offtake transactions.

THE COMMODITY SUPPLIER

Organization. The Commodity Supplier is a Delaware limited liability company organized for the sole purpose of entering into the transactions on its part with respect to the Commodity Project described herein. J. Aron is the sole member of the Commodity Supplier (the “*Member*”), and has funded the Commodity Supplier with the cash equity contribution and the subordinated loans described below.

The Commodity Supplier is governed by a three-member board of directors. One director is appointed by J. Aron, one director is appointed by NCEA, and the third director is an independent director appointed by J. Aron. The directors have appointed J. Aron as the manager of the Commodity Supplier.

The director appointed by NCEA has the sole consent rights with respect to certain matters, including: the designation of a CSSA Early Termination Date under the Commodity Sale and Service Agreement; the designation of a Commodity Delivery Termination Date under the Commodity Purchase Agreement due to the occurrence of a Ledger Event; the enforcement of the Funding Agreement; under certain circumstances, the removal and replacement of J. Aron as manager of the Commodity Supplier; the appointment of a third-party commodity remarketing agent under the Commodity Purchase Agreement in the event that there are private business use sales or non-private business use sales of gas or electricity that are not remediated within twelve Months; the removal and replacement of the SPE Master Custodian; and certain determinations with respect to Reset Periods under the Re-Pricing Agreement. NCEA covenants in the Indenture that, in any vote that comes before the board of directors of the Commodity Supplier regarding the Commodity Supplier Documents, it will instruct the NCEA-appointed director to exercise its voting rights in favor of (a) the Commodity Supplier (i) observing and performing its obligations under the Commodity Purchase Agreement and (ii) observing and performing its obligations and enforcing the provisions of the other Commodity Supplier Documents against the counterparties thereto, and (b) not permitting any assignment, rescission, amendment or waiver to or of the Commodity Supplier Documents which will in any manner materially impair or materially adversely affect the rights of NCEA thereunder or the rights or security of the Bondholders under the Indenture.

The director appointed by J. Aron has sole consent rights with respect to other matters, including: (a) the designation of a Commodity Delivery Termination Date under the Commodity Purchase Agreement due to a

termination of the NCEA Commodity Swap; and (b) the termination or replacement of the Commodity Supplier Commodity Swap.

The independent director is required to consider only the interests of the Commodity Supplier and its creditors in acting or voting on certain material actions that require the unanimous consent of the directors. No resignation or removal of the independent director will be effective until a successor independent director has accepted his or her appointment.

Subordinated Loan Agreements; Capitalization. Pursuant to two Subordinated Term Loan Agreements (the “*Subordinated Loan Agreements*”), J. Aron has agreed (a) to make an initial term loan to the Commodity Supplier in the amount of \$____ million not later than the closing date under the Commodity Purchase Agreement (the “*Initial Term Loan*”), and (b) if, following an Event of Default (as defined in the Funding Agreement) with respect to the Funding Recipient, the Commodity Supplier exercises its right to demand payment of the entire amount held in the Funding Account (or the Funding Agreement terminates automatically due the dissolution, liquidation or similar proceeding with respect to the Funding Recipient), an additional loan of up to \$____ million on any Early Termination Payment Date under the Commodity Purchase Agreement (the “*Contingent Term Loan*”). The Commodity Supplier’s repayment obligations under the Subordinated Loan Agreements are subordinate to the Commodity Supplier’s obligations under the Commodity Supplier Commodity Swap, the Commodity Purchase Agreement and the Commodity Sale and Service Agreement to the extent set forth in the SPE Master Custodial Agreement described below.

J. Aron will also make a cash equity contribution to the Commodity Supplier. The cash equity contribution, the amount of the Initial Term Loan and, if made, the amount of the Contingent Term Loan together equal at least three percent of the outstanding (unamortized) balance of the prepayment under the Commodity Purchase Agreement (approximately \$____ million as of the Initial Issue Date).

SPE Master Custodial Agreement. The Commodity Supplier, J. Aron, NCEA and The Bank of New York Mellon, as custodian (the “*SPE Master Custodian*”), will enter into an SPE Master Custodial Agreement (the “*SPE Master Custodial Agreement*”) to administer:

(a) the amounts payable to the Commodity Supplier under (i) the Funding Agreement, (ii) the Commodity Sale and Service Agreement, (iii) the Commodity Purchase Agreement, (iv) the Commodity Supplier Commodity Swap and (v) the Subordinated Loan Agreements, and

(b) the Funding Agreement and the amounts payable by the Commodity Supplier under (i) the Commodity Purchase Agreement, (ii) the Commodity Sale and Service Agreement, (iii) the Commodity Supplier Commodity Swap and (iv) the Subordinated Loan Agreements.

The SPE Master Custodial Agreement establishes a revenue account (the “*Commodity Supplier Revenue Account*”) and a capital account (the “*Commodity Supplier Capital Account*”) with the SPE Master Custodian. The amounts payable to the Commodity Supplier under the Funding Agreement, the Commodity Sale and Service Agreement, the Commodity Purchase Agreement and the Commodity Supplier Commodity Swap are to be paid directly into the Commodity Supplier Revenue Account.

Under the SPE Master Custodial Agreement, the SPE Master Custodian will, to the extent of the amounts on deposit in the Commodity Supplier Revenue Account, make monthly transfers for the payment of

amounts due by the Commodity Supplier under the Commodity Supplier Commodity Swap, the Commodity Purchase Agreement and the Commodity Sale and Service Agreement. Following these monthly transfers, any remaining funds in the Commodity Supplier Revenue Account are transferred to the Commodity Supplier Capital Account. Pending their application, the amounts in the Commodity Supplier Revenue Account are held in trust for the benefit of the Commodity Supplier.

The Commodity Supplier Capital Account will be initially funded by J. Aron with the cash equity contribution and the Initial Term Loan under the Subordinated Loan Agreements. [From these sources, an amount equal to the Minimum Amount will be deposited in the Commodity Supplier Capital Account. Under the SPE Master Custodial Agreement, the amounts in the Commodity Supplier Capital Account may be invested only in direct obligations of the United States or obligations unconditionally guaranteed by the United States, in either case with a maturity of two years or less, certain certificates of deposit and demand deposits, certain money market funds and cash.

Amounts on deposit in the Commodity Supplier Capital Account shall be withdrawn by the SPE Master Custodian and applied: *first*, to the extent the SPE Master Custodian determines necessary to meet the Commodity Supplier's collateral posting obligations under the credit support annex to the Commodity Supplier Commodity Swap; and *second* to make up any deficiency of the amounts on deposit in the Commodity Supplier Revenue Account for the purposes described above.

The SPE Master Custodian shall only withdraw amounts on deposit in the Commodity Supplier Capital Account for payment of principal and interest on the Subordinated Loan Agreements to the extent that the "Commodity Supplier Capital Amount" (defined below) exceeds the greater of (i) three percent of the outstanding (unamortized) balance of the prepayment under the Commodity Purchase Agreement, and (ii) \$[] after the monthly payments from the Commodity Supplier Revenue Account and the Commodity Supplier Capital Account described above. The SPE Master Custodian shall not be required to transfer any amount from the Commodity Supplier Capital Account for the monthly payment of principal and interest on the Subordinated Loan Agreements if the remaining balance in the Commodity Supplier Capital Account following such transfer will be less than \$[].

"Commodity Supplier Capital Amount" means, at any time, the sum of (y) amounts then on deposit in the Commodity Supplier Capital Account, and (z) all committed amounts then available for Commodity Supplier to draw under the Subordinated Loan Agreements, as notified by Commodity Supplier to the SPE Master Custodian from time to time.

The SPE Master Custodian shall have a lien, security interest and right of set-off against the Commodity Supplier Capital Account for the payment of any claim by the SPE Master Custodian for compensation, reimbursement or indemnity under the SPE Master Custodial Agreement.

Under no circumstance is the Commodity Supplier, J. Aron or GSG obligated to pay any amounts owed in respect of the Bonds.

THE FUNDING AGREEMENT

Set forth below is a summary of certain provisions of the Funding Agreement. This summary does not purport to be a complete description of the terms and conditions of the Funding Agreement and accordingly is qualified by reference to the full text thereof.

[to come]

Under no circumstance is the Funding Recipient obligated to pay any amounts owed in respect of the Bonds.

THE COMMODITY SWAPS

Set forth below is a summary of certain provisions of the Commodity. This summary does not purport to be a complete description of the terms and conditions of the Commodity Swaps and accordingly is qualified by reference to the full text of the Commodity Swaps.

GENERAL

As noted above, effective as of the Initial Issue Date: (a) NCEA's 2018 swap agreement will be amended and restated to replace RBCEL with Royal Bank as the Commodity Swap Counterparty and to include notional quantities of Commodities with respect to the additional quantities of Commodities to be delivered under the Commodity Purchase Agreement (as amended and restated, *the "NCEA Commodity Swap"*); (b) J. Aron will novate and transfer all of its interests under its 2018 swap agreement with RBCEL to the Commodity Supplier; and (c) the Commodity Supplier's 2018 swap agreement will be amended and restated to replace RBCEL with Royal Bank as the Commodity Swap Counterparty and to include notional quantities of Commodities with respect to the additional quantities Commodities to be delivered under the Commodity Purchase Agreement (as amended and restated, *the "Commodity Supplier Commodity Swap"*).

Gas Delivery Period. Commencing with gas deliveries for _____ 20__, NCEA will pay a floating natural gas price at a specified pricing point and will receive a fixed natural gas price for notional quantities that correspond to the quantities of natural gas and the related delivery point under the Commodity Purchase Agreement. Under the NCEA Commodity Swap, for each calendar month that the relevant floating price of natural gas at the delivery point is greater than the fixed price specified in the NCEA Commodity Swap, NCEA will be obligated to pay to the Commodity Swap Counterparty an amount equal to the product of (x) the difference between the floating price and the fixed price multiplied by (y) a notional quantity equal to the quantity of gas scheduled to be delivered at the delivery point during such month by the Commodity Supplier under the Commodity Purchase Agreement. If the fixed price specified in the NCEA Commodity Swap is greater than the relevant floating price of natural gas at the delivery point for a month, the Commodity Swap Counterparty will be obligated to pay NCEA an amount equal to the product of (x) the difference between the fixed price and floating price multiplied by (y) a notional quantity equal to the quantity of gas scheduled to be delivered at the delivery point during such month by the Commodity Supplier under the Commodity Purchase Agreement. If the relevant floating price for a calendar month is equal to the specified fixed price, no payment will be owed by either party to the other under the NCEA Commodity Swap.

Under the Commodity Supplier Commodity Swap, the Commodity Supplier pays a fixed natural gas price and receives a floating natural gas price for the same notional quantities at the same pricing point.

Electricity Delivery Period. During the Electricity Delivery Period, the Commodity Swaps will be dormant and no payments will be required to be made under them to the extent that all of the Contract Quantities of electricity are fixed price Assigned Prepay Quantities. To the extent that Hourly Quantities of electricity are delivered by the Commodity Supplier, NCEA will pay a floating electricity price at a specified pricing point and will receive a fixed electricity price for notional quantities that correspond to the quantities of electricity and the related delivery point under the Commodity Purchase Agreement. Under the NCEA Commodity Swap, for each delivery hour that the relevant floating price of electricity at the delivery point is greater than the fixed price specified in the NCEA Commodity Swap, NCEA will be obligated to pay to the Commodity Swap Counterparty an amount equal to the product of (x) the difference between the floating price and the fixed price multiplied by (y) a notional quantity equal to the quantity of electricity scheduled to be delivered at the delivery point during such delivery hour by the Commodity Supplier under the Commodity Purchase Agreement. If the fixed price specified in the NCEA Commodity Swap is greater than the relevant floating price of electricity at the delivery point for a delivery hour, the Commodity Swap Counterparty will be obligated to pay NCEA an amount equal to the product of (x) the difference between the fixed price and floating price multiplied by (y) a notional quantity equal to the quantity of electricity scheduled to be delivered at the delivery point during such delivery hour by the Commodity Supplier under the Commodity Purchase Agreement. If the relevant floating price for a delivery hour is equal to the specified fixed price, no payment will be owed by either party to the other under the NCEA Commodity Swap.

Term. Each of the Commodity Swaps has an initial term that commences on the date that Commodity deliveries begin under the amended and restated Commodity Purchase Agreement and extends for two calendar months. The Commodity Swaps have rolling two-month terms that renew automatically upon the payment due date of each monthly net settlement amount due thereunder through the term of the Gas Delivery Period (or Electricity Delivery Period, as applicable) under the Commodity Purchase Agreement, unless a Commodity Delivery Termination Date occurs under the Commodity Purchase Agreement.

FORM OF COMMODITY SWAPS

Each of the Commodity Swaps has been entered into as a confirmation under a 2002 ISDA Master Agreement with certain amendments and elections under the Master Agreement that have been agreed to by the parties.

PAYMENT

For each month of scheduled Commodities deliveries and notional amounts, each party with a net obligation under a Commodity Swap (based on the relative values of the fixed price and relevant index prices) will pay that net obligation to the other party. Payments under the Commodity Swaps are due in the calendar month following the month to which the applicable Commodity index prices relate, on the 24th day of the month (or preceding business day) in the case of the Commodity Supplier Commodity Swap and on the 25th day of the month (or next business day) in the case of the NCEA Commodity Swap.

EARLY TERMINATION

Each of the Commodity Swaps will be subject to early termination under certain circumstances. Early termination can be triggered automatically or upon the election by the non-defaulting party as summarized below.

No settlement or other termination payment (other than Unpaid Amounts) will be due to any party as a result of any early termination of any Commodity Swap.

Automatic Termination of Commodity Swaps. Each of the following events would result in the automatic termination of the NCEA Commodity Swap and the Commodity Supplier Commodity Swap:

- the occurrence of a Commodity Delivery Termination Date under the Commodity Purchase Agreement for any reason, in which case the Commodity Swaps will terminate automatically on such date; and
- delivery by NCEA of a notice of termination of the NCEA Commodity Swap results in the automatic termination of the Commodity Supplier Commodity Swap, and delivery by the Commodity Supplier of a notice of termination of the Commodity Supplier Commodity Swap results in the automatic termination of the NCEA Commodity Swap.

Elective Termination of the NCEA Commodity Swap. Each of the following events of default and termination events would provide the non-defaulting party or the affected party the right to terminate the NCEA Commodity Swap if it is not cured within the applicable cure period:

- a party becomes subject to certain insolvency events in the manner specified in the NCEA Commodity Swap;
- the Commodity Swap Counterparty fails to satisfy its credit support obligations in the manner specified in the NCEA Commodity Swap;
- a reduction below certain specified minimum ratings in the credit rating assigned by the applicable rating agency to the Commodity Swap Counterparty's senior, unsecured long-term debt obligations (not supported by third party credit enhancements) or, if there is no such rating, then the Commodity Swap Counterparty's issuer rating (the "*Commodity Swap Counterparty's Credit Rating*");
- a party's failure to pay amounts when due under the NCEA Commodity Swap (notwithstanding any payments made by the Custodian under the Commodity Supplier Custodial Agreement) that is not remedied within three business days after notice;
- amendment of the Indenture in breach of the Commodity Swap Counterparty's consent rights thereunder;

- the amendment, without the Commodity Swap Counterparty’s consent, of certain provisions of the Commodity Purchase Agreement relating to the termination or assignment thereof, or that would affect terminations of the Commodity Swaps; and
- NCEA fails to promptly exercise its right to suspend all Commodity deliveries under the Commodity Supply Contract if the Project Participant fails to pay when due any amounts owed to NCEA thereunder.

Elective Termination of the Commodity Supplier Commodity Swap. Each of the following events of default and termination events would provide the non-defaulting party or the affected party the right to terminate the Commodity Supplier Commodity Swap if it is not cured within the applicable cure period:

- if a party becomes subject to certain insolvency events in the manner specified in the Commodity Supplier Commodity Swap;
- a party fails to satisfy its credit support obligations in the manner specified in the Commodity Supplier Commodity Swap;
- any reduction in the Commodity Swap Counterparty’s Credit Rating (as described above) below certain specified minimum ratings;
- the amendment, without the Commodity Swap Counterparty’s consent, of (a) certain provisions of the Commodity Purchase Agreement relating to the termination or assignment thereof, or that would affect terminations of the Commodity Swaps or (b) certain provisions of the Receivables Purchase Provisions relating to the purchase of Swap Call Receivables by the Commodity Supplier; and
- a party’s failure to pay amounts when due under the Commodity Supplier Commodity Swap (notwithstanding any payments made by the Custodian under the Commodity Supplier Custodial Agreement) that is not remedied within one business day after notice.

Other Listed Events. The Commodity Swaps contain other listed events (including breach or repudiation, misrepresentation, illegality and certain tax and credit events) that do not give NCEA, the Commodity Supplier or the Commodity Swap Counterparty the right to designate an early termination date, but which permit the non-defaulting party or the affected party to pursue such equitable remedies, including specific performance, as may be available.

Replacement of Commodity Swaps. See “THE COMMODITY PURCHASE AGREEMENT—Replacement of Commodity Swaps” and “SECURITY FOR THE BONDS—Enforcement of Project Agreements—NCEA Commodity Swap” for a description of certain provisions of the Indenture and the Commodity Purchase Agreement regarding the replacement of a Commodity Swap that is terminated or subject to termination.

CUSTODIAL AGREEMENT

As noted above, J. Aron and RBCEL will novate all of their interests under an existing custodial agreement to the Commodity Supplier and Royal Bank as the Commodity Swap Counterparty, respectively (the

“Commodity Supplier Custodial Agreement”), which provides for the administration of payments under the Commodity Supplier Commodity Swap by Computershare Trust Company, N.A., as Trustee and as custodian (in such capacity, the “Custodian”). The Commodity Supplier Custodial Agreement contains certain provisions designed to mitigate risks to NCEA and Bondholders resulting from a failure of the Commodity Swap Counterparty to make payments to NCEA under the NCEA Commodity Swap.

Payments made by the Commodity Supplier under the Commodity Supplier Commodity Swap will be made to a custodial account maintained by the Custodian under the Commodity Supplier Custodial Agreement. Such amounts will not be released until the Custodian has received confirmation that the amount payable to NCEA by the Commodity Swap Counterparty under the NCEA Commodity Swap for such month has been paid. If the Commodity Swap Counterparty does not make a required payment under the NCEA Commodity Swap and such payment remains unpaid after the expiration of any grace period, the Custodian will pay the amount that the Commodity Supplier paid under the Commodity Supplier Commodity Swap (which such amount is held in custody) to the Trustee for deposit in the Revenue Fund and that payment will be treated as a Commodity Swap Receipt. Additionally, if the Commodity Supplier Commodity Swap terminates, the Commodity Supplier will continue to make payments to the custodial account as if the Commodity Supplier Commodity Swap were still in effect until the earlier of (i) replacement of the Commodity Swaps in accordance with the requirements of the Commodity Purchase Agreement and (ii) termination of the Delivery Period under the Commodity Purchase Agreement, and such payments will be used to ensure that NCEA receives deposits in the Revenue Fund as described in the preceding sentence in the event that the Commodity Swap Counterparty does not make a required payment under the NCEA Commodity Swap.

THE COMMODITY SWAP COUNTERPARTY

Set forth below is certain information regarding the Commodity Swap Counterparty. NCEA assumes no responsibility for such information and cannot guarantee the accuracy thereof. Under no circumstance is the Commodity Swap Counterparty obligated to pay any amount owed in respect of the Bonds.

[2024Q1 RBC disclosure to come.]

THE COMMODITY SUPPLY CONTRACT

Set forth below is a summary of certain provisions of the Commodity Supply Contract between NCEA and the Project Participant..

GENERAL

In 2018, NCEA and the Project Participant entered into a commodity supply contract (the “2018 Commodity Supply Contract”) which provided for the purchase and sale of Commodities over a thirty-year term ending on May 31, 2049. Effective on the Initial Issue Date of the Bonds, NCEA and the Project Participant will amend and restate the 2018 Commodity Supply Contract [to extend the term thereof and] to make certain conforming amendments (the 2018 Commodity Supply Contract as amended and restated is referred to herein as the “Commodity Supply Contract”). Deliveries of gas under the 2018 Commodity Supply Contract will continue through [_____], and deliveries of Commodities under the Commodity Supply Contract will begin in [_____] and continue to the end of the stated delivery period under the Commodity Purchase

Agreement (_____, 20__), provided that, if an Early Termination Date occurs under the Commodity Purchase Agreement, the Commodity Supply Contract will terminate on the Early Termination Date.

The Commodity Supply Contract provides for the sale to the Project Participant, on a pay-as-you-go basis, of all of the Commodities to be delivered to NCEA over the term of the Commodity Purchase Agreement. Under the Commodity Supply Contract, NCEA has agreed to deliver, and the Project Participant has agreed to purchase, the specified Contract Quantities of gas at a designated delivery point during the Gas Delivery Period and the specified Hourly Quantities of electricity at a designated delivery point during the Electricity Delivery Period. The Project Participant is obligated to pay NCEA for the quantities of Commodities delivered under the Commodity Supply Contract, including contracted quantities tendered for delivery by NCEA but not taken by the Project Participant (for which the Project Participant is eligible to receive a credit based on revenues received for the remarketed Commodities under certain circumstances described in such Commodity Supply Contract). The Project Participant has no obligation to pay for Commodities that NCEA fails to deliver.

PRICING PROVISIONS

The Commodities sold under the Commodity Supply Contract are priced at the applicable “Contract Price,” which (a) in the case of the Contract Quantity of gas, is the Monthly Index Price for the gas delivery point plus any applicable delivery point premium, (b) in the case of the Hourly Quantity of electricity, is the Day-Ahead Market Price for the electricity deliver point and (c) in the case of the Assigned Prepay Quantity of Assigned Electricity, is the fixed price per MWh set forth in the Assigned PPA, in each case *less* a specified discount determined in accordance with the Commodity Supply Contract.

The “*Monthly Index Price*” means a charge per MMBtu equal to the monthly market index price for the month of delivery reported in the first monthly edition, or the revised edition, if applicable, of the publication *Inside FERC’s Gas Market Report*, in the section “Monthly Bidweek Spot Gas Prices (\$/MMBtu),” for the gas delivery point specified in the Commodity Supply Agreement under the column “Index.” If *Inside FERC’s Gas Market Report* ceases to be published, the Monthly Index Price shall be derived via an alternative index. The “*Day-Ahead Market Price*” means the day ahead market price or the locational marginal price for the electricity delivery point for each applicable hour as published by the California Independent System Operator Corporation, or as such price may be corrected or revised from time to time by such independent system operator or other entity in accordance with its rules.

Through the Commodity Project, the Project Participant anticipates realizing a discount to market index natural gas prices. No assurance can be given as to the total actual discounts the Project Participant will realize.

[The Project Participant must pay to NCEA a monthly Supply Administration Fee based on the Project Participant’s Daily Quantity of Commodities. The Supply Administration Fee is not included as part of the Revenues and is not pledged to the payment of the Bonds.]

BILLING AND PAYMENT

Not later than the 12th day of the month following the end of the delivery month, NCEA must provide a monthly billing statement to the Project Participant of the amount due for Commodities delivered during the prior month. The due date for payment by the Project Participant will be on or before the later of (a) the 22nd day of the month following the most recent month to which the billing statement relates or (b) the 10th day

following the Project Participant's receipt of NCEA's billing statement (or if either such day is not a business day, the preceding business day). If the Project Participant disputes the appropriateness of any charge or calculation in any billing statement, the Project Participant still must pay (absent manifest error) all amounts billed by NCEA, including any amounts in dispute, and must object to such billing statement within two years after the applicable month of delivery. If it is ultimately determined that the Project Participant did not owe the disputed amount, NCEA must pay the Project Participant the disputed amount plus interest.

ANNUAL REFUNDS

NCEA has agreed to provide annual refunds to the Project Participant from amounts available for distribution pursuant to the Indenture. In determining the amount of such refunds, NCEA may reserve such funds as may be required under the terms of the Indenture or as it deems reasonably necessary and appropriate to cover anticipated costs and expenses to be incurred in the next succeeding bond year, with certain limitations.

COVENANTS OF THE PROJECT PARTICIPANT

Operating Expense. The Project Participant has agreed to make payments under the Commodity Supply Contract from the revenues of its electric utility system as an operating expense of its electric utility system.

Maintenance of Rates and Charges. The Project Participant has covenanted and agreed that it will fix, prescribe, maintain, and collect rates, fees, and charges for the electricity or services furnished by its electric utility system so as to provide revenues sufficient to enable it to pay all amounts payable under the Commodity Supply Contract and all other amounts payable from the revenues of the Project Participant's electric system, and to maintain any required reserves.

Pledge of Electric System Revenues. The Project Participant agrees that it will not grant any lien on or security interest in, or otherwise pledge or encumber, the revenues of its electric utility system that would create a lien, pledge or other encumbrance having priority over the obligations of the Project Participant to pay the amounts due to NCEA under the Commodity Supply Agreement.

Tax-Exempt Status of Bonds. The Project Participant acknowledges that the Bonds will be issued with the intention that the interest thereon will be exempt from federal taxes under Section 103 of the Code. Accordingly, the Project Participant agrees that it will (a) provide such information with respect to its utility system as may be requested by NCEA in order to establish the tax-exempt status of the Bonds, and (b) act in accordance with such written instructions as NCEA may provide from time to time in order to maintain the tax-exempt status of the Bonds. The Project Participant further agrees that it will not at any time take any action, or fail to take any action, that would adversely affect the tax-exempt status of the Bonds.

Without limiting the foregoing, the Project Participant has further agreed, subject to certain remediation rights, to use the Commodities purchased under the Commodity Supply Contract (a) in a "qualifying use" as defined in the applicable Treasury Regulations, (b) in a manner that will not result in any "private business use" within the meaning of Section 141 of the Code, and (c) in a manner consistent with its Federal Tax Certificate (collectively, the "*Qualifying Use Requirements*").

Remediation. The Project Participant may at times need to remarket, or inadvertently remarket, Commodities received under the Commodity Supply Contract in a manner that does not comply with Qualifying

Use Requirements due to daily and hourly fluctuations in the Project Participant's Commodity needs. To the extent the Project Participant does so, the Project Participant shall, to the extent possible, use the proceeds of such remarketing to purchase Commodities (other than Priority Commodities) that the Project Participant uses in compliance with the Qualifying Use Requirements not later than the end of the semi-annual period in which such proceeds were received. To track compliance with these requirements, the Project Participant will provide a semi-annual report to NCEA (delivered not later than the fifteenth day of each April and October until the end of the Delivery Period) showing the following: the total quantity of proceeds from sales of Commodities received under the Commodity Supply Contract that (a) were sold by the Project Participant to any person other than a Municipal Utility and (b) have not been remediated by the Project Participant by applying such proceeds to purchase gas or electricity that is used in compliance with the Qualifying Use Requirements.

TRANSPORTATION; TITLE AND RISK OF LOSS

Except as otherwise provided in the Commodity Supply Contract, NCEA must make arrangements for all transportation and transmission services required to effect, and must bear all costs and expenses of, transportation and transmission prior to the delivery of the Contract Quantity at the applicable delivery point specified in the Commodity Supply Contract. The Project Participant must make all arrangements for all transportation and transmission services required to receive the Contract Quantity at such delivery point and to transport it from such delivery point.

Title to the Commodities delivered under the Commodity Supply Contract and risk of loss pass from NCEA to the Project Participant at the applicable delivery point; *provided* that the transfer of title and risk of loss for Assigned Gas and Assigned Electricity shall be in accordance with the applicable Gas Assignment Agreement or PPA Assignment Agreement. With respect to gas, NCEA will be deemed to be in exclusive control and possession of gas prior to the time of delivery to the Project Participant at the delivery point, and the Project Participant will be deemed to be in exclusive control and possession of gas thereafter.

FAILURE TO PERFORM

Except in the case of a "Force Majeure" event, for each Commodity Unit that NCEA is obligated to deliver to the Project Participant but fails to deliver, NCEA must pay to the Project Participant an amount equal to the difference between the Contract Price per Commodity Unit which would have been applicable to the undelivered Commodity and any higher cost per Commodity Unit which the Project Participant actually incurred to obtain an equivalent quantity of replacement gas or electricity.

In the event that NCEA tenders the Contract Quantity for delivery to the Project Participant and the Project Participant fails to take the full amount of the Contract Quantity (except in the case of a "Force Majeure" event, described below), the Project Participant will remain obligated to pay NCEA the Contract Price for the full amount of the Contract Quantity. NCEA will credit to the Project Participant's account the net amount described under the heading "THE COMMODITY PURCHASE AGREEMENT—Commodity Remarketing."

REMARKETING OF COMMODITIES

In the event the Project Participant (a) does not require or is unable to receive all or any portion of the Contract Quantity that it is obligated to purchase under the Commodity Supply Contract as a result of (i)

decreased gas requirements due to reduced generation requirements during the Gas Delivery Period, (ii) decreased demand by the Project Participant's retail customers or (iii) a change in law, or (b) makes a Remarketing Election for any Reset Period (as described under "THE COMMODITY PROJECT—Re-Pricing Agreement"), NCEA will arrange for the sale by the Commodity Supplier of the affected quantities of Commodities to another Municipal Utility or other purchaser pursuant to the remarketing provisions of the Commodity Purchase Agreement; provided that, in the case of a remarketing request to the Commodity Supplier under clause (a)(iii) above, notice of such a remarketing must be provided at least six months in advance as set forth in the Commodity Purchase Agreement and the Commodity Supplier must consent to such a remarketing, with such consent to be provided in its sole discretion. Under the Commodity Purchase Agreement, NCEA arranges for sales through the Commodity Supplier in accordance with the remarketing provisions and procedures set forth in that agreement. Except in the case of a Remarketing Election given by the Project Participant, if the Commodity Supplier successfully makes such a sale or sales, NCEA must credit, in circumstances described in the Commodity Supply Contract, against the amount owed by the Project Participant for such gas revenues received by NCEA from the sales of such gas less all directly incurred costs or expenses (which include remarketing fees paid to the Commodity Supplier), but in no event more than the Contract Price. If the Project Participant that makes a Remarketing Election in accordance with the provisions of the Commodity Supply Contract, it will have no obligation to purchase or receive Commodities, and NCEA shall have no obligation to sell or deliver Commodities, under the Commodity Supply Contract, during the applicable Reset Period.

See "THE COMMODITY PURCHASE AGREEMENT—Commodity Remarketing" and "THE COMMODITY SALE AND SERVICE AGREEMENT—Commodity Remarketing."

FORCE MAJEURE

Except with regard to a party's obligation to make payments under the Commodity Supply Contract that are then due or becoming due with respect to performance prior to the Force Majeure, neither party shall be liable to the other for failure to perform its obligations under the Commodity Supply Contract to the extent such failure was caused by an event of "*Force Majeure*," which is defined in the Commodity Supply Contract during the Gas Delivery Period as (i) physical events such as acts of God, landslides, lightning, earthquakes, fires, storms or storm warnings, such as hurricanes, which result in evacuation of the affected area, floods, washouts, explosions, breakage or accident or necessity of repairs to machinery or equipment or lines of pipe; (ii) weather related events affecting an entire geographic region, such as low temperatures which cause freezing or failure of wells or lines of pipe; (iii) interruption and/or curtailment of transportation and/or storage by Transporters (*provided* that if the affected Party is using interruptible or secondary Firm transportation, only if primary, in-path, Firm transportation is also curtailed by the same event, or, if the relevant Transporter does not curtail based on path, if primary Firm transportation is also curtailed); (iv) acts of others such as strikes, lockouts or other industrial disturbances, riots, sabotage, insurrections, wars or acts of terror; and (v) governmental actions such as necessity for compliance with Law promulgated by a government agency having jurisdiction.

During the Electricity Delivery Period, "*Force Majeure*" means an event or circumstance which prevents one party from performing its obligations under the Commodity Supply Contract, which event or circumstance was not anticipated as of date of execution of the Commodity Supply Contract, which is not within the reasonable control of, or the result of the negligence of, the party claiming Force Majeure, and which, by the exercise of due diligence, the claiming party is unable to overcome or avoid or cause to be avoided.

In addition, any invocation of Force Majeure by the Commodity Supplier under the Commodity Purchase Agreement constitutes Force Majeure under the Commodity Supply Contract.

DEFAULT AND REMEDIES

NCEA Default. Each of the following events constitute a “*NCEA Default*” under the Commodity Supply Contract:

- (a) any representation or warranty made by NCEA in the Commodity Supply Contract proves to have been incorrect in any material respect when made; or
- (b) NCEA fails to perform, observe or comply with any covenant, agreement or term contained in the Commodity Supply Contract, and such failure continues for more than 30 days following the earlier of (i) receipt by NCEA of notice thereof or (ii) an officer of NCEA becoming aware of such default.

Project Participant Default. Each of the following events shall constitute a “*Project Participant Default*” under the Commodity Supply Contract:

- (a) the Project Participant fails to pay when due any amounts owed to NCEA pursuant to the Commodity Supply Contract and such failure continues for one business day following the earlier of (i) receipt by the Project Participant of notice thereof or (ii) an officer of the Project Participant becoming aware of such default;
- (b) the Project Participant’s insolvency or bankruptcy;
- (c) any representation or warranty made by the Project Participant in the Commodity Supply Contract proves to have been incorrect in any material respect when made; or
- (d) the Project Participant fails to perform, observe or comply with any covenant, agreement or term contained in the Commodity Supply Contract, and such failure continues for more than 15 days following the earlier of (i) receipt by the Project Participant of notice thereof or (ii) an officer of the Project Participant becoming aware of such default.

Termination. If at any time an NCEA Default or a Project Participant Default has occurred and is continuing, then the non-defaulting party may do any or all of the following by notice to the defaulting Party specifying the relevant NCEA Default or Project Participant Default, as applicable, terminate the Commodity Supply Contract effective as of a day not earlier than the day such notice is deemed given under the Commodity Supply Contract and/or declare all amounts due to the non-defaulting party under the Commodity Supply Contract or any part thereof immediately due and payable, and the same shall thereupon become immediately due and payable, without notice, demand, presentment, notice of dishonor, notice of intent to demand, protest or other formalities of any kind, all of which are expressly waived by the defaulting party; *provided, however,* the Commodity Supply Contract will automatically terminate and all amounts due to the non-defaulting party thereunder will immediately become due and payable as of the time immediately preceding the institution of the relevant proceeding or the presentation of the relevant petition that upon the occurrence of certain events relating to a Project Participant Default described in (b) above. In addition, during the existence of an NCEA Default or

a Project Participant Default, as applicable, the non-defaulting party may exercise all other rights and remedies available to it at Law or in equity, including without limitation mandamus, injunction and action for specific performance, to enforce any covenant, agreement or term of the Commodity Supply Contract.

As of the effectiveness of any termination date described in the preceding paragraph, (a) the Delivery Period ends, (b) the obligation of NCEA to make any further deliveries of gas to the Project Participant under the Commodity Supply Contract terminates, and (c) the obligation of Purchaser to receive deliveries of Commodities from NCEA under the Commodity Supply Contract terminates. Neither this Agreement nor the Delivery Period may be terminated for any reason except as specified in the Commodity Supply Contract. Without prejudice to any payment obligation in respect of periods prior to termination, no payments will be due from either Party in respect of periods occurring after the effective termination date of the Commodity Supply Contract.

ASSIGNMENT

The provisions of the Commodity Supply Contract are binding on the successors and assigns of such contract. Neither party may assign the Commodity Supply Contract to another party without the prior written consent of the other party, except that NCEA may assign its interests to secure its obligations under the Indenture. Prior to assigning all or any part of its interest in the Commodity Supply Contract, the Project Participant is required to deliver Rating Confirmations from all rating agencies then rating the Bonds.

COMMODITY ASSIGNMENT AGREEMENTS

Gas. The Project Participant may assign and J. Aron may agree to assume a portion of the Project Participant's rights and obligations under an Upstream Supply Contract consistent with the terms set forth in the Commodity Supply Agreement.

Electricity. From time to time, the Project Participant may be a party to one or more power purchase agreements other than the Commodity Supply Contract (an "*Assignable Contract*") pursuant to which the Project Participant is purchasing electricity, renewable energy credits and other products that may be assigned pursuant to the provisions of the Commodity Supply Contract ("*Assigned Product*"). The Project Participant may assign, and NCEA shall request that J. Aron accept the assignment of, a portion of the Project Participant's rights and obligations under such Assignable Contract (the "*Assigned Rights and Obligations*"), and J. Aron, to the extent it accepts such assignment, will deliver Assigned Product it receives from such Assigned Rights and Obligations to NCEA under the Prepaid Agreement, and NCEA will deliver such Assigned Product to the Project Participant under the Commodity Supply Contract. To the extent so assigned, NCEA's obligation to deliver, and the Project Participant's obligation to receive, the Hourly Quantity shall be reduced to reflect the Assigned Product acquired by NCEA pursuant to such assignment.

NORTHERN CALIFORNIA ENERGY AUTHORITY

[Update]

GENERAL

SMUD and SFA formed NCEA by their execution of a Joint Powers Agreement, dated as of November 8, 2018 (the “*Joint Powers Agreement*”). SFA is itself a joint powers authority formed by SMUD and the Modesto Irrigation District in 1992. NCEA has the power, among others, under the Act and the Joint Powers Agreement to take all action necessary or convenient to assist SMUD in the acquisition and financing of supplies of natural gas and electricity.

GOVERNANCE AND MANAGEMENT

Under the Joint Powers Agreement, the Board of Directors of SMUD is the governing body (the “*Commission*”) of NCEA. The current members of the Commission are listed in APPENDIX B under the caption “INTRODUCTION—Independent Governance.” Certain of SMUD’s officers, including its Chief Executive Officer, Chief Financial Officer, Treasurer, Controller and Secretary, jointly serve in the same or similar capacities as officers of NCEA. NCEA has no independent employees. The Chief Legal Officer and General Counsel of SMUD serves as general counsel to NCEA.

Pursuant to the Joint Powers Agreement, SMUD will provide or cause to be provided such technical and general and administrative services as NCEA may reasonably require. NCEA may reimburse SMUD for its actual costs of providing such services. Although SMUD has provided and will continue to provide NCEA with staffing and consultant support pursuant to the Joint Powers Agreement SMUD does not have any obligation or liability to NCEA beyond that specifically provided in the Joint Powers Agreement and the Commodity Supply Contract. SFA and the Modesto Irrigation District have no obligations or liabilities to NCEA.

LIMITED LIABILITY

THE BONDS DO NOT CONSTITUTE A DEBT OR LIABILITY OF THE STATE OF CALIFORNIA OR OF ANY POLITICAL SUBDIVISION THEREOF (INCLUDING THE PROJECT PARTICIPANT), OTHER THAN NCEA, BUT SHALL BE PAYABLE SOLELY FROM THE FUNDS PROVIDED THEREFOR UNDER THE INDENTURE. NCEA SHALL NOT BE OBLIGATED TO PAY THE PRINCIPAL OR REDEMPTION PRICE OF OR INTEREST ON THE BONDS, EXCEPT FROM THE FUNDS PROVIDED THEREFOR UNDER THE INDENTURE AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OF CALIFORNIA OR OF ANY POLITICAL SUBDIVISION THEREOF, INCLUDING NCEA, OR OF THE PROJECT PARTICIPANT IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OR REDEMPTION PRICE OF AND INTEREST ON THE BONDS. THE ISSUANCE OF THE BONDS SHALL NOT DIRECTLY OR INDIRECTLY OR CONTINGENTLY OBLIGATE THE STATE OF CALIFORNIA OR ANY POLITICAL SUBDIVISION THEREOF (INCLUDING THE PROJECT PARTICIPANT) TO LEVY OR TO PLEDGE ANY FORM OF TAXATION OR TO MAKE ANY APPROPRIATION FOR THEIR PAYMENT. NCEA HAS NO TAXING POWER.

CERTAIN FACTORS AFFECTING NCEA AND THE PROJECT PARTICIPANT

GENERAL

Various factors will affect the operations of NCEA and Project Participant, including, for example:

- retention of existing customers by the Project Participant;

- local, regional and national economic conditions;
- the market price of gas, electricity and the market price of alternate forms of energy;
- fuel conservation measures;
- the availability of alternate energy sources;
- climatic conditions;
- government regulation and deregulation of the energy industry;
- federal and state regulation of, and private sector initiatives to limit, greenhouse gas emissions; and
- technological advances in fuel economy and energy generation devices.

NCEA is unable to predict the impact of the foregoing factors, and other factors, on the Project Participant and their respective gas and electricity system operations. However, the gas and electricity supply and services to be provided by NCEA are intended to maintain and improve the competitive position of the Project Participant by providing them with additional services and competitive prices for a portion of their gas supply.

DISRUPTIONS IN THE NATURAL GAS MARKET

The Project Participant engages in various transactions in the natural gas markets, including the purchase and sale of natural gas and transactions to hedge their exposure to changes in the market price of natural gas. The ability of the Project Participant to enter into these transactions is dependent upon a variety of factors, including most notably prevailing conditions in the natural gas market.

At various times in the past, the natural gas market experienced severe disruptions, including extremely high and volatile commodity prices, inverted forward price curves and constrained transportation and sources of supply. The factors giving rise to these conditions — demands for gas and other forms of energy, economic conditions, weather patterns, inadequate regulation by federal and state authorities, and the exercise of market power and the manipulation of the gas markets by marketers or others are beyond the control of NCEA and the Project Participant. To the extent that disruptions in the natural gas market prevent the Project Participant from engaging in those transactions that are necessary to enable it to manage risks, its financial and operating position may be adversely affected.

On February 13 through February 17, 2021, a major winter and ice storm had widespread impacts across the central, southeastern and eastern United States, northern Mexico, and parts of Canada (“*Winter Storm Uri*”), which resulted in electricity blackouts for over 9.9 million people in the United States and contributed to significant shortages of, and substantially increased costs for, natural gas across the United States. [NCEA did not experience any material supply or payment disruptions under its long-term supply and sales contracts due to the events of Winter Storm Uri.]

On February 24, 2022, Russia commenced a military invasion of Ukraine. The invasion, subsequent economic sanctions imposed by nations opposed to the invasion, and reductions and suspensions of Russian gas deliveries impacted global natural gas markets and resulted in significant increases in the market price of natural gas in the United States. While these impacts have subsided, it is not possible to predict the ongoing effects of the continuing military conflict in Ukraine on natural gas markets and gas prices.

THE PROJECT PARTICIPANT

For information regarding Sacramento Municipal Utility District, see APPENDIX B—INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT.

CONTINUING DISCLOSURE

NCEA, the Project Participant and Computershare Trust Company, N.A., will enter into a Continuing Disclosure Agreement (the “*Undertaking*”) for the benefit of the beneficial owners of the Bonds to send certain information annually and to provide notice of certain events to the MSRB’s EMMA system for municipal securities disclosures, pursuant to the requirements of Section (b)(5) of Rule 15c2-12 (“*Rule 15c2-12*”) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended.

A failure by NCEA or the Project Participant to comply with the Undertaking will not constitute an event of default under the Indenture, the Bonds or the Commodity Supply Contract, and Beneficial Owners of the Bonds shall only be entitled to the remedies for any such failure described in the Undertaking. A failure by NCEA or the Project Participant to comply with certain provisions of the Undertaking must be reported in accordance with Rule 15c2-12 and must be considered by any broker, dealer or municipal securities dealer before recommending the purchase or sale of the Bonds in the secondary market. Consequently, such a failure may adversely affect the transferability and liquidity of the Bonds and their market price.

The Undertaking and commitments of NCEA and the Project Participant described under this heading and in APPENDIX E hereto to furnish the above-described documents and information are agreements and commitments solely of NCEA and the Project Participant, and the Underwriter has no responsibility to ensure that NCEA and the Project Participant comply with the Undertaking and such commitments. In addition, the Underwriter makes no representation that any such documents or information will be furnished, or that any such documents or information so furnished will be accurate or complete, or sufficient for the purposes for which they may be used.

NCEA and the Project Participant report that there have been no instances in the five years previous to the date of this Official Statement in which they failed to comply in all material respects with their prior continuing disclosure undertakings pursuant to Rule 15c2-12. [NTD: update/confirm]

NCEA and the Project Participant have adopted a written policy that sets forth procedures for compliance with the federal tax and continuing disclosure requirements applicable to its bonds. The policy includes, among other things, procedures that are intended to promote NCEA and the Project Participant’s compliance with the Undertaking.

LITIGATION

There are no proceedings or transactions relating to the issuance, sale or delivery of the Bonds which could adversely affect the Commodity Project. In addition, there is no litigation pending or, to the knowledge of NCEA, threatened against or affecting NCEA or in any way questioning or in any manner affecting the validity or enforceability of the Bonds, the Commodity Supply Contract, the Commodity Purchase Agreement, the NCEA Commodity Swap, the Receivables Purchase Provisions, the Investment Agreement, the Commodity Supplier Custodial Agreement, the Indenture or the pledge of the Trust Estate under the Indenture.

The Project Participant reports that there is no litigation pending or, to its knowledge, threatened against it questioning or in any manner affecting the validity or enforceability of the Commodity Supply Contract.

FINANCIAL STATEMENTS

The financial statements of NCEA which comprise the balance sheets as of December 31, 2022 and 2021, and the related statements of revenue and expenses and changes in net position and cash flows for the years then ended and the related notes to the financial statements, have been audited by Baker Tilly US, LLP of Madison, Wisconsin, independent auditors as stated in their report. The financial statements of NCEA as of December 31, 2022 and 2021 are attached as APPENDIX A. Baker Tilly US, LLP has not been engaged to perform and has not performed, since the date of its report included herein, any procedures on the financial statements addressed in that report. Baker Tilly US, LLP also has not performed any procedures relating to this Official Statement.

FINANCIAL ADVISOR

NCEA has retained PFM Financial Advisors LLC, as financial advisor (the “*Financial Advisor*”), in connection with various matters relating to the issuance of the Bonds. While the Financial Advisor assisted in the review and preparation of this Official Statement and in other matters relating to the planning, structuring and issuance of the Bonds, the Financial Advisor assumes no responsibility for the accuracy, completeness or fairness of the information contained in this Official Statement. The Financial Advisor is an independent advisory firm and is not engaged in underwriting or distributing securities. The Financial Advisor will receive compensation that is contingent upon the sale, issuance and delivery of the Bonds.

UNDERWRITING

Goldman Sachs & Co. LLC (the “*Underwriter*”) has entered into a purchase contract relating to the Bonds with NCEA, pursuant to which the Underwriter has agreed, subject to certain conditions, to purchase the Bonds from NCEA at an aggregate purchase price of \$_____ (representing the principal amount of the Bonds, plus original issue premium of \$_____, less an underwriter’s discount of \$_____). The obligation of the Underwriter to purchase the Bonds is subject to certain terms and conditions set forth in the purchase contract. The Underwriter is obligated to purchase all the Bonds if any are purchased. The Bonds may be offered and sold to certain dealers and others at prices lower than the initial offering prices, and such initial offering prices may be changed from time to time by the Underwriter. The Underwriter has no obligations other than those that are set forth in the purchase contract. The payment of the Bonds is not guaranteed by the Underwriter.

Goldman Sachs & Co. LLC (together with its affiliates) is a full service financial institution engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Goldman Sachs & Co. LLC and its affiliates have provided, and may in the future provide, a variety of these services to NCEA and SMUD and to persons and entities with relationships with NCEA and SMUD, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriter and its affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own accounts and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of NCEA and SMUD (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with NCEA and SMUD. The Underwriter and its affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

CERTAIN RELATIONSHIPS

The Commodity Supplier, which is also the Receivables Purchaser, the purchaser under the Commodity Sale and Service Agreement and a party under the Commodity Supplier Commodity Swap, is wholly owned by J. Aron. J. Aron is the sole member of the Commodity Supplier, the seller under the Commodity Sale and Service Agreement, and a wholly owned subsidiary of GSG. The payment obligations of J. Aron to the Commodity Supplier under the Commodity Sale and Service Agreement are unconditionally guaranteed by GSG under the CSSA Guaranty. The Underwriter of the Bonds, Goldman Sachs & Co. LLC, is also a wholly owned subsidiary of GSG.

None of the Commodity Supplier, J. Aron nor GSG has guaranteed or is responsible for the payment of the Bonds. The obligations of the Commodity Supplier are limited to those set forth in the Commodity Purchase Agreement, the Receivables Purchase Provisions and the Commodity Supplier Commodity Swap. The obligations of J. Aron are limited to those set forth in the Commodity Sale and Service Agreement. None of the Commodity Supplier, J. Aron nor GSG takes any responsibility for the information set forth in this Official Statement other than the information set forth under the caption “GSG, J. ARON AND THE COMMODITY SUPPLIER”.

The members of SMUD’s Board of Directors also serve as members of NCEA’s Commission and certain of SMUD’s officers, including its Chief Executive Officer, Chief Financial Officer, Treasurer and Controller, jointly serve in the same capacities as officers of NCEA. NCEA has no independent employees.

RATING

Moody’s Investors Service, Inc. has assigned a municipal bond rating of “[]” ([] outlook) to the Bonds.

NCEA has furnished to each rating agency expected to rate the bonds being offered certain information, including information not included in this Official Statement, about NCEA and the Bonds. Generally, rating agencies base their ratings on that information and on independent investigations, studies and assumptions made by each rating agency. A securities rating is not a recommendation to buy, sell or hold securities. There is no assurance that a rating, once obtained, will continue for any given period of time or that it will not be revised downward or withdrawn entirely if, in the opinion of the rating agency, circumstances so warrant. Any such downward revision or withdrawal could have an adverse effect on the marketability or market price of the Bonds. NCEA has not undertaken any responsibility after issuance of the Bonds to assure the maintenance of the ratings applicable thereto or to oppose any revision or withdrawal of such ratings.

TAX MATTERS

[TBU by Bond Counsel]

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to NCEA (“*Bond Counsel*”), based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Code, and the Bonds and interest thereon are exempt from all state, county, municipal and other taxation in the State of California. Bond Counsel is of the further opinion that interest on the Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. Bond Counsel observes that interest on the Bonds included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Bonds. A complete copy of the proposed form of opinion of Bond Counsel is set forth in APPENDIX F hereto.

The Bonds purchased, whether at original issuance or otherwise, for an amount higher than their principal amount payable at maturity (or, in some cases, at their earlier call date) (“*Premium Bonds*”) will be treated as having amortizable bond premium. No deduction is allowable for the amortizable bond premium in the case of bonds, like the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, the amount of tax-exempt interest received, and a Beneficial Owner’s basis in a Premium Bond, will be reduced by the amount of amortizable bond premium properly allocable to such Beneficial Owner. Beneficial Owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Bonds. NCEA and SMUD have made certain representations and covenanted to comply with certain restrictions, conditions and requirements designed to ensure that interest on the Bonds will not be included in federal gross income. Inaccuracy of these representations or failure to comply with these covenants may result in interest on the Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the Bonds. The opinion of Bond Counsel assumes the accuracy of these representations and compliance with these covenants. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken), or events occurring (or not occurring), or any other matters coming to Bond Counsel’s attention after the date of issuance of the Bonds may adversely affect the value of, or the tax status of interest on, the Bonds.

Although Bond Counsel is of the opinion that interest on the Bonds is excluded from gross income for federal income tax purposes and is exempt from State of California personal income taxes, the ownership or disposition of, or the amount, accrual or receipt of interest on, the Bonds may otherwise affect a Beneficial Owner's federal, state or local tax liability. The nature and extent of these other tax consequences depends upon the particular tax status of the Beneficial Owner or the Beneficial Owner's other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the Bonds to be subject, directly or indirectly, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent Beneficial Owners from realizing the full current benefit of the tax status of such interest. The introduction or enactment of any such legislative proposals, clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the Bonds. Prospective purchasers of the Bonds should consult their own tax advisors regarding any pending or proposed federal or state tax legislation, regulations or litigation, and regarding the impact of future legislation, regulations or litigation, as to which Bond Counsel expresses no opinion.

The opinion of Bond Counsel is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service ("IRS") or the courts. Furthermore, Bond Counsel cannot give and has not given any opinion or assurance about the future activities of NCEA or SMUD, or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. NCEA and SMUD have covenanted, however, to comply with the requirements of the Code.

Bond Counsel's engagement with respect to the Bonds ends with the issuance of the Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend NCEA, SMUD or the Beneficial Owners regarding the tax-exempt status of the Bonds in the event of an audit examination by the IRS. Under current procedures, parties other than NCEA, SMUD and their appointed counsel, including the Beneficial Owners, would have little, if any, right to participate in the audit examination process. Moreover, because achieving judicial review in connection with an audit examination of tax-exempt bonds is difficult, obtaining an independent review of IRS positions with which NCEA or SMUD legitimately disagrees may not be practicable. Any action of the IRS, including but not limited to selection of the Bonds for audit, or the course or result of such audit, or an audit of bonds presenting similar tax issues, may affect the market price for, or the marketability of, the Bonds, and may cause NCEA, SMUD or the Beneficial Owners to incur significant expense.

Payments on the Bonds generally will be subject to U.S. information reporting and possibly to "backup withholding." Under Section 3406 of the Code and applicable U.S. Treasury Regulations issued thereunder, a non-corporate Beneficial Owner of Bonds may be subject to backup withholding with respect to "reportable payments," which include interest paid on the Bonds and the gross proceeds of a sale, exchange, redemption, retirement or other disposition of the Bonds. The payor will be required to deduct and withhold the prescribed amounts if (i) the payee fails to furnish a U.S. taxpayer identification number ("TIN") to the payor in the manner required, (ii) the IRS notifies the payor that the TIN furnished by the payee is incorrect, (iii) there has been a "notified payee underreporting" described in Section 3406(c) of the Code or (iv) the payee fails to certify under penalty of perjury that the payee is not subject to withholding under Section 3406(a)(1)(C) of the Code. Amounts withheld under the backup withholding rules may be refunded or credited against a Beneficial Owner's federal income tax liability, if any, provided that the required information is timely furnished to the IRS. Certain

Beneficial Owners (including among others, corporations and certain tax-exempt organizations) are not subject to backup withholding. The failure to comply with the backup withholding rules may result in the imposition of penalties by the IRS.

APPROVAL OF LEGAL MATTERS

The validity of the Bonds and certain other legal matters are subject to the approving opinion of Bond Counsel. A complete copy of the proposed form of the opinion of Bond Counsel is contained in APPENDIX F to this Official Statement. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Official Statement.

The validity of the Bonds and certain other legal matters are subject to the approving opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to NCEA. The opinion of Bond Counsel, substantially in the form set forth in APPENDIX F to this Official Statement, will be delivered with the Bonds. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Official Statement.

Certain legal matters will be passed upon for NCEA by its general counsel and by McCarter & English, LLP; for the Commodity Supplier by its counsel, Sheppard, Mullin, Richter & Hampton LLP; for the Funding Recipient by its counsel, [_____]; for GSG by its counsel, [Sullivan & Cromwell LLP]; and for the Underwriter by Chapman and Cutler LLP.

NCEA will receive an opinion from the counsel to the Project Participant on the date of original delivery of the Bonds, to the effect that the Commodity Supply Contract has been duly authorized, executed and delivered and constitutes the legal, valid and binding obligation of the Project Participant enforceable in accordance with its terms. The enforceability of the Commodity Supply Contract may be limited by or subject to applicable bankruptcy, insolvency, moratorium, reorganization, other laws affecting creditors' rights generally and by general principles of equity, public policy and commercial reasonableness.

MISCELLANEOUS

Any statements in this Official Statement involving matters of opinion, estimates or forecasts, whether or not expressly so stated, are intended as such and not as representations of fact. The Appendices attached hereto are an integral part of this Official Statement and must be read in conjunction with the foregoing material. This Official Statement is not to be construed as a contract or agreement between NCEA and the purchasers or owners of the Bonds.

The delivery of this Official Statement has been duly authorized by the Board of Directors of NCEA.

The delivery of this Official Statement has been duly authorized by the Commission of NCEA.

NORTHERN CALIFORNIA ENERGY AUTHORITY

By: _____
Treasurer

APPENDIX B

INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT

DRAFT

APPENDIX B

**INFORMATION REGARDING
SACRAMENTO MUNICIPAL UTILITY DISTRICT**

TABLE OF CONTENTS

	Page
INTRODUCTION	A-1
General.....	A-1
Independent Governance	A-1
THE SERVICE AREA AND ELECTRIC SYSTEM.....	A-4
The Service Area.....	A-4
The Electric System	A-5
BUSINESS STRATEGY	A-5
General.....	A-5
Serving SMUD’s Customers.....	A-6
Sustainable Power Supply and Transmission	A-8
Electricity, Natural Gas, and Related Hedging.....	A-13
Managing Risks	A-14
Competitive Challenges	A-14
Leveraging Core Competencies	A-14
FACTORS AFFECTING THE REGION	A-16
Precipitation Variability	A-16
Wildfires	A-17
August 2020 Heat Wave	A-19
September 2022 Heat Wave.....	A-19
Storm Damage	A-19
Cosumnes Power Plant Outage.....	A-20
Impacts from COVID-19 Pandemic	A-20
RATES AND CUSTOMER BASE	A-21
Rates and Charges.....	A-21
Rate Stabilization Funds	A-22
Low Income Discount.....	A-23
Rate Comparisons	A-24
Allocation of Revenue by Customer Class	A-26
Customer Base; Largest Customers	A-27
POWER SUPPLY AND TRANSMISSION.....	A-28
Power Supply Resources.....	A-28
Power Generation Facilities.....	A-29
Fuel Supply	A-32
Gas Transmission.....	A-34
Gas Storage	A-35
Power Purchase Agreements.....	A-36
Transmission Service Agreements.....	A-39
Projected Resources	A-40
Demand Side Management Programs.....	A-41
Balancing Authority Area Agreements.....	A-44
Power Pool and Other Agreements.....	A-44
Other Interconnection Agreements	A-45
SELECTED OPERATING DATA.....	A-47

TABLE OF CONTENTS

(continued)

	Page
SELECTED FINANCIAL DATA	A-47
SMUD Financial Information	A-47
Financial Information of SMUD and the Authorities	A-49
Management’s Discussion of SMUD’s Operating Results	A-50
RANCHO SECO DECOMMISSIONING.....	A-51
EMPLOYEE RELATIONS	A-53
RETIREMENT BENEFITS AND POST-EMPLOYMENT MEDICAL BENEFITS	A-53
Pension Plans	A-53
Other Post-Employment Benefits	A-55
CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS	A-56
Estimated Capital Requirements.....	A-56
Outstanding Indebtedness	A-56
INSURANCE.....	A-60
LEGAL PROCEEDINGS	A-60
Environmental Litigation	A-60
Proposition 26 Lawsuit	A-60
Other Litigation Matters	A-61
FERC Administrative Proceedings	A-61
CPUC Administrative Proceedings.....	A-61
DEVELOPMENTS IN THE ENERGY SECTOR	A-62
California Electric Market	A-62
Cybersecurity	A-63
Physical Security.....	A-63
Federal Legislation and Regulatory Proceedings.....	A-63
State Legislation and Regulatory Proceedings.....	A-67
Future Regulation	A-74
OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY.....	A-74
CAISO Market Initiatives	A-74
Resource Adequacy Filing.....	A-75
Western Energy Imbalance Market and Extended Day Ahead Market	A-75
Other Factors.....	A-76

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

BOARD OF DIRECTORS

Rosanna Herber, President
Gregg Fishman, Vice President
Brandon Rose
Nancy Bui-Thompson
Rob Kerth
Dave Tamayo
Heidi Sanborn

OFFICERS AND EXECUTIVES

Paul Lau, Chief Executive Officer and General Manager
Frankie McDermott, Chief Operating Officer
Scott Martin, Chief Financial Officer
Brandy Bolden, Chief Customer Officer
Suresh Kotha, Chief Information Officer
Jose Bodipo-Memba, Chief Diversity Officer
Laura Lewis, Chief Legal and Government Affairs Officer and General Counsel
Lora Anguay, Chief Zero Carbon Officer
Farres Everly, Chief Marketing & Communications Officer
Russell Mills, Treasurer
Lisa Limcaco, Controller

INTRODUCTION

General

The Sacramento Municipal Utility District (“SMUD”) owns and operates an electric system that has provided retail electric service since 1946. SMUD’s current service area is approximately 900 square miles, and includes the principal parts of Sacramento County and small portions of Placer and Yolo counties. See “THE SERVICE AREA AND ELECTRIC SYSTEM – The Service Area.”

Independent Governance

SMUD is an independently run community-owned organization. SMUD is not required by law to transfer any portion of its collections from customers to any local government.

SMUD is governed by a Board of Directors (the “Board”), which consists of seven directors elected by ward for staggered four-year terms. The Board determines policy and appoints the Chief Executive Officer and General Manager, who is responsible for SMUD’s overall management and day-to-day operations. The Chief Executive Officer and General Manager is responsible for the hiring and removal of all employees, other than the Chief Legal and Government Affairs Officer and General Counsel, the Internal Auditor and the Special Assistant to the Board, who are hired and may be removed only by the Board. The employment status of nearly all SMUD employees is governed by a civil service system administered by the Chief Executive Officer and General Manager.

The Board elects its President and Vice President annually to take office in January. The current members of the Board are as follows:

Name	Occupation	Ward	Term Expires
Brandon Rose.....	Air Pollution Specialist, California Environmental Protection Agency	Ward 1	December 31, 2024
Nancy Bui-Thompson.....	Chief Information Officer, Wellspace Health	Ward 2	December 31, 2024
Gregg Fishman, Vice-President....	Sr. Community Relations Officer at Sacramento Regional Transit District	Ward 3	December 31, 2026
Rosanna Herber, President.....	Community Engagement Manager	Ward 4	December 31, 2026
Rob Kerth	Business Owner	Ward 5	December 31, 2024
Dave Tamayo.....	Retired Environmental Specialist	Ward 6	December 31, 2026
Heidi Sanborn	Executive Director, National Stewardship Action Council	Ward 7	December 31, 2026

SMUD’s senior management consists of the following executives:

Chief Executive Officer & General Manager. Paul Lau was named Chief Executive Officer and General Manager (“CEO & GM”) of SMUD in October 2020. He reports to the SMUD Board of Directors. As CEO & GM, he leads the sixth largest community-owned electric utility in the nation, serving a population of approximately 1.5 million residents and managing a \$2.1 billion budget. Mr. Lau previously served as SMUD’s Chief Grid Strategy & Operations Officer and has held several other executive leadership positions during his 42-year career at SMUD. He serves on several national and local boards, including the Large Public Power Council, California Municipal Utilities Association, American Public Power Association, and Smart Electric Power Alliance, and as a Commissioner of the Balancing Authority

of Northern California (“BANC”). A registered professional electrical engineer in the State of California (the “State”), Mr. Lau received his bachelor’s degree in electrical power engineering from California State University, Sacramento.

Chief Customer Officer. Brandy Bolden reports to the CEO & GM and oversees SMUD’s Customer and Community Services business unit. She is responsible for customer experience delivery across SMUD’s residential and commercial customer segments. She provides leadership and oversight of customer operations including customer care and revenue management, business intelligence, strategic account management, customer experience and segmentation strategy, channel management, customer program and service delivery, and special assistance. She is also responsible for commercial development and business attraction and oversees Community Energy Services, which provides services and support for community choice aggregators. Since joining SMUD in 2003, Brandy has demonstrated strong leadership and held a variety of senior leadership roles, including leading the Customer & Community Services project management office and the dual role of director of Customer Care and Revenue Operations. Ms. Bolden led the team responsible for implementing time-of-day rates, streamlining the meter-to-cash processes, delivering key billing and payment experience enhancements and recognizing operational efficiencies that resulted in sustained annual savings for SMUD. Ms. Bolden holds a Bachelor of Arts in Sociology from University of California, Davis.

Chief Information Officer. Suresh Kotha reports to the CEO & GM and is responsible for SMUD’s information technology strategy, operations, infrastructure, IT Project Management Office, enterprise innovation process, and cybersecurity. More recently, Mr. Kotha has been leading many technology efforts that are integral to developing a grid of the future that will help SMUD achieve its zero-carbon goal, including its Advanced Distribution Management System, the software platform that supports the full suite of distribution management and optimization, and next-generation network upgrades. Mr. Kotha joined SMUD in 2002 as a principal technical developer, with responsibility for designing and leading implementation and upgrades of multiple technology systems, including the SAP software platform and SMUD’s meter-to-cash systems. He holds a Master of Technology in Computer Science from Jawaharlal Nehru Technology University and a Bachelor of Engineering in Electronics & Communications Engineering from Gulbarga University.

Chief Diversity Officer. Jose Bodipo-Memba reports to the CEO & GM and is responsible for human resources, workforce diversity and inclusion, workforce business planning, SMUD’s Sustainable Communities program, facilities, security and emergency operations. Mr. Bodipo-Memba joined SMUD in 2010 as an environmental specialist and became manager of Environmental Services in 2016. He most recently served as SMUD’s first director of Sustainable Communities. Mr. Bodipo-Memba holds a Bachelor of Arts degree in history from University of California, Berkley and Masters of Business Administration from Drexel University.

Chief Legal & Government Affairs Officer and General Counsel. Laura Lewis was named general counsel for SMUD in April 2014. In this position she serves as chief lawyer and manages SMUD’s legal office and its staff of eight attorneys. She also serves as the secretary to SMUD’s elected board of directors. She reports to the Board and to the CEO & GM and has responsibility for all legal matters in which SMUD is a party to, or has an interest in. Ms. Lewis also oversees SMUD’s government affairs and reliability compliance department. In this capacity, she is responsible for management and coordination of all legislative matters and regulatory requirements affecting SMUD at the state and federal level, including the FERC-NERC electric reliability standards. Ms. Lewis is also responsible for Procurement, Warehouse & Fleet and Energy Trading & Contracts. Ms. Lewis joined SMUD in 1997 as a staff attorney, serving in that capacity through 1999, after which she moved to the San Francisco law firm Davis Wright Tremaine. In 2002, she returned to SMUD as a senior attorney. In 2010, she became assistant general counsel and in 2013 was appointed chief assistant general counsel. She holds a juris doctorate from McGeorge School of

Law, where she won membership in the Order of the Coif honor society. She holds a bachelor's degree in political science from the University of California, San Diego and is a member of the American Bar Association, the Energy Bar Association, and the State Bar of California.

Chief Operating Officer. Frankie McDermott reports to the CEO & GM and is responsible for providing strategic leadership and tactical oversight related to the safe and reliable transmission and delivery of energy to customers, ensuring efficient planning, construction, operation and maintenance of transmission, and distribution facilities. This position has primary responsibility for the processes and functions related to system reliability and operations across SMUD. The Chief Operating Officer is also the safety leader for the enterprise, leader of operational efficiency and responsible for all non-IT capital investments. Prior to this role, Mr. McDermott served as Chief Energy Delivery Officer and Chief Customer Officer, responsible for SMUD's overall retail strategy. From 2010 to 2014, he served as customer services director, which included managing relationships with customer segments as SMUD moved forward with smart-grid technologies. Prior to that, he served as manager of enterprise performance and held positions in supply chain and in general services. Before joining SMUD in 2003, Mr. McDermott served in management roles in the semiconductor industry at NEC Electronics in Roseville, California and in Ireland. After engineering school in Ireland, he earned an MBA from Golden Gate University and completed the Advanced Management Program at the Haas School of Business at the University of California Berkeley.

Chief Zero Carbon Officer. Lora Anguay reports to the CEO & GM and is responsible for leadership oversight of SMUD's Energy Supply which includes SMUD's Power Generation Assets, Resource Planning and Customer and Grid Strategy. This role is also responsible for the delivery of SMUD's plan to provide 100% carbon free energy resources by 2030. This includes obtaining new grants and partnerships, overseeing research and development, designing distributed energy resource programs, enabling processes to settle distributed energy transactions with SMUD's customers and transitioning SMUD's power generation assets and energy contracts to zero carbon resources. Prior to assuming this role, Ms. Anguay was the director of Distribution Operations & Maintenance and was responsible for the day-to-day operations of SMUD's electric distribution grid. Before that she was an engineering designer, process control supervisor, project manager for smart meter deployment, a senior project manager for smart grid distribution automation and supervisor in Grid Assets. Before SMUD, she worked for Oracle Corporation as a finance manager and is a veteran who served in the United States Coast Guard. Ms. Anguay joined SMUD in 2004 and holds a Bachelor of Science degree in business administration from California State University, Sacramento.

Chief Financial Officer. Scott Martin reports to the CEO & GM and is responsible for corporate accounting, treasury operations, risk management, and planning and budgets functions. He is also responsible for strategies across the company and driving prioritization including zero carbon, rates and pricing, enterprise strategic planning and enterprise prioritization. Mr. Martin is a seasoned executive with more than 30 years of experience. Prior to assuming this role, Mr. Martin was SMUD's Chief Strategy Officer. Mr. Martin's previous experience also includes serving as SMUD's customer strategy planning supervisor. Mr. Martin joined SMUD in 1999 and holds a Bachelor of Arts degree in economics from the University of California, Berkeley and a Master of Arts degree in economics from the University of Nevada, Las Vegas.

Chief Marketing & Communications Officer. Farres Everly reports to the CEO & GM and is responsible for all aspects of SMUD's marketing, market research, corporate communications, website, graphic design, video services, data analytics, social media, community engagement, crisis communications, and public affairs activities. Mr. Everly led the creative development and execution of SMUD's numerous award-winning marketing and outreach campaigns and developed the community engagement and communications strategies that resulted in SMUD being ranked number one in California in J.D. Power's annual customer satisfaction surveys and in SMUD becoming the first utility to receive J.D.

Power's Certified Sustainability Leader designation. Prior to joining SMUD, Mr. Everly held marketing and communications management roles at VSP and the Money Store. He holds a bachelor's degree in journalism from California State University, Chico.

Treasurer. Russell Mills reports to the CFO. He oversees all treasury operations, including debt and cash management, banking, financial planning and forecasting, commodity risk management, property and casualty insurance, and is responsible for developing and implementing capital borrowing strategies. Mr. Mills also serves as treasurer for the Transmission Agency of Northern California ("TANC"), the Sacramento Municipal Utility District Financing Authority ("SFA"), the Northern California Gas Authority No. 1 ("NCGA"), the Northern California Energy Authority ("NCEA") and BANC. Before joining SMUD in 2018 as Treasurer, Mr. Mills served as Chief Financial Officer of Southern California Public Power Authority. He also served as the Chief Financial Officer of the Power Supply Program at the California Department of Water Resources ("DWR"). He holds an MBA from Loyola Marymount University, and a bachelor's degree in economics from Towson University in Baltimore, Maryland. Mr. Mills also holds the Energy Risk Professional (ERP) designation and is a CFA level II candidate.

Controller. Lisa Limcaco reports to the CFO and is responsible for accounting and financial reporting at SMUD. Prior to her appointment as controller in 2020, Ms. Limcaco served as an assistant controller, manager of customer value, performance and projects, senior energy commodity specialist and as principal accountant for SMUD's joint powers authorities. Ms. Limcaco also serves as controller for TANC, SFA, NCGA, NCEA and BANC. Before joining SMUD in 2010 as a senior accountant, Ms. Limcaco had 12-years' experience as the Director of Accounting and controller for a food service provider in Sacramento and over 13-years' experience in public accounting including audit manager at Price Waterhouse LLP. Ms. Limcaco holds a bachelor's degree in accounting from the University of Hawaii, a Master of Business Administration from Sacramento State University and is a Certified Public Accountant in the State.

THE SERVICE AREA AND ELECTRIC SYSTEM

The Service Area

SMUD is the primary distributor of electric power within an area of approximately 900 square miles in central California. The service area includes the State Capital, Sacramento, the populous areas principally to the northeast and south of the City of Sacramento (the "City" or "Sacramento") and the agricultural areas to the north and south. The City is located 85 miles northeast of San Francisco.

SMUD's electric system supplies power to a population of approximately 1.5 million with a total annual retail load of approximately 10,104 million kilowatt-hours ("kWh") for the year ended December 31, 2023. As the capital of the nation's most populous state, Sacramento benefits from the historically stabilizing influence of a large government sector. Sacramento is home to the State government headquarters, the Sacramento County seat, the City government and various special districts that combine to make government the largest single employment sector in the Sacramento area. Information technology, transportation, education and health services, leisure and hospitality, and construction round out the other major sectors of employment and industry in the area.

SMUD's annual peak load has averaged 3,045 Megawatts ("MW") over the last three years, with SMUD's record peak load of 3,299 MW occurring on July 24, 2006. In 2022, SMUD recorded its second highest peak load of 3,263 MW. SMUD reviews its load forecast, at a minimum, on an annual basis.

The Electric System

SMUD owns and operates an integrated electric system that includes generation, transmission and distribution facilities.

SMUD supplies power to its bulk power substations through a 230 kilovolt (“kV”) and 115 kV transmission system. This system transmits power from SMUD’s generation plants and interconnects with Pacific Gas & Electric (“PG&E”) and the Western Area Power Administration (“WAPA”). Power is distributed throughout Sacramento County via a 69 kV sub-transmission system with the exception of the City’s downtown area, which is served from the 115 kV transmission system. The downtown area is served from 115/12 kV and 115/21 kV substations. The distribution system serving the remainder of SMUD’s service territory is comprised of 69/12 kV substations with overhead and underground 12 kV distribution circuits.

BUSINESS STRATEGY

General

SMUD’s Board of Directors has established the following purpose and vision statements: “SMUD’s purpose is to enhance the quality of life for our customers and community by providing reliable and affordable electricity, and leading the transition to a clean energy future. SMUD’s vision is to be a trusted and powerful partner in achieving an inclusive, zero carbon economy. SMUD will leverage its relationships to accelerate innovation, ensure energy affordability and reliability, protect the environment, eliminate greenhouse gas emissions, catalyze economic and workforce development, promote environmental justice, and enhance community vitality for all.” The Board has adopted a set of Strategic Directions with related metrics, which it considers essential for the success of SMUD and for serving SMUD’s customers. These include competitive rates, access to credit markets, reliability, customer relations, environmental leadership, resource planning, enterprise risk management and safety. Some of the general elements in SMUD’s business strategy are:

- developing and maintaining a sustainable and reliable power supply to meet demand growth consistent with State mandates and the Board’s directions for renewable energy and the reduction of carbon emissions to zero by 2030. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *2030 Zero Carbon Plan*”;
- working closely with customers to provide the information, tools and incentives to assist them to more efficiently manage energy use, which will contribute to meeting greenhouse gas (“GHG”) emission targets and managing needle peak demand requirements (those 40 or so hours of the year with extreme temperatures when customer demand surges by up to 400 additional MW);
- managing price, volumetric and credit risks associated with energy and natural gas procurement;
- attracting, developing and retaining a diverse, skilled and engaged workforce that reflects SMUD’s values and is committed to achieving SMUD’s mission;
- retaining local decision making authority and operational independence; and
- collaborating regionally to attract new businesses and grow existing business to diversify and strengthen the Sacramento economy.

SMUD’s long-range business strategy focuses in part on ensuring financial stability by establishing rates that provide an acceptable fixed charge coverage ratio on a consolidated basis, taking into consideration the impact of capital expenditures and other factors on cash flow. SMUD’s Board policy sets

a minimum fixed charge coverage ratio of 1.50 times for annual budgets, though it generally plans to meet a minimum fixed charge coverage ratio of 1.70 times. Over the past ten years, the actual fixed charge coverage ratio has averaged 2.10 times on a consolidated basis. SMUD also manages its liquidity position by planning for a minimum of 150 days cash on hand and planning to maintain at least \$150 million of available capacity under its commercial paper and line of credit program. SMUD's commercial paper and line of credit program is currently authorized for \$500 million aggregate principal amount outstanding at any one time. As of March 21, 2024, SMUD had \$150 million aggregate principal amount of its commercial paper notes outstanding and \$350 million of the authorized aggregate principal amount of its commercial paper and line of credit program available for use. SMUD uses cash on hand and commercial paper and a line of credit to fund capital expenditures, then issues debt to reimburse itself for cash expended for qualified capital expenditures and/or to pay down the outstanding principal amount of its commercial paper program and line of credit. Over the past ten years, the days cash on hand has averaged 216. The resolutions securing SMUD's Senior Bonds and Subordinated Bonds (each as defined under the caption "CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS" below) do not require SMUD to maintain a minimum fixed charge coverage ratio, minimum days cash on hand or minimum available capacity under its commercial paper program and line of credit.

In addition, SMUD's business strategy focuses on servicing its customers in a progressive, forward-looking manner, addressing current regulatory and legislative issues and potential competitive forces.

Serving SMUD's Customers

SMUD continually looks for ways to better serve and partner with its customers to further strengthen customer loyalty, while providing competitive and fair pricing for SMUD's electric services. SMUD also has a focused effort to assist and incentivize customers to manage energy use more efficiently, which will contribute to meeting GHG emission targets and managing peak demand requirements as noted below.

Digital Enhancements. Customers are increasingly turning to digital channels including SMUD's mobile application, SMUD.org, e-mail and social media to interact and do business with SMUD. SMUD has delivered many digital enhancements, including bill pay functionality; online payment arrangements; start/stop/transfer move service; view of energy usage, chat, an enhanced outage map including meter test functionality; and the SMUD Energy Store, which is an online marketplace for energy-related products. SMUD plans to continue efforts to provide more personalized digital customer experiences.

Advanced Metering, Infrastructure and Rate Design. As a community-owned organization, SMUD is dedicated to providing the tools and transparency in customer energy usage to enable customers to easily and positively affect energy usage, energy cost, and climate change. In 2012 SMUD installed smart technology, including 617,000 digital communicating smart meters, distribution automation systems and equipment to facilitate load management. The advanced technology has allowed SMUD to deliver tools such as text and e-mail bill alerts and online energy usage comparison charts to help customers manage energy use. SMUD has leveraged smart grid investments to improve reliability, reduce losses, reduce power quality issues and improve customer service through better, more timely information.

Time-of-Day Rates. On June 15, 2017, the Board approved time-of-day ("TOD") rates as the standard rate for residential customers. The residential rate transition began in the fourth quarter of 2018 and was completed in the fourth quarter of 2019.

All of SMUD's business customers are also on time-based rates. On June 24, 2019, the Board approved an update to the commercial TOD rates to improve consistency and better align commercial rates

with current energy market prices. The transition was completed in the first quarter of 2022. See “RATES AND CUSTOMER BASE – Rates and Charges.”

Renewable Options. SMUD’s customers have been increasingly interested in distributed energy resources, mainly through the installation of solar systems. As of December 2023, approximately 51,374 of SMUD’s residential and commercial customers, approximately 8% of retail customers, had installed solar systems, representing approximately 360 MW of solar installations.

As the cost of energy storage continues to decline, SMUD anticipates an increase in behind-the-meter energy storage, mainly through the installation of battery storage systems. As of December 2023, approximately 1,532 of SMUD’s residential and commercial customers, approximately 0.2% of retail customers, had installed storage systems, representing approximately 10 MW of storage.

As another option for solar, SMUD’s SolarShares® pilot program (the “SolarShares Pilot”) was established as a cost-effective and convenient way for commercial customers to meet their energy needs from solar power. The SolarShares Pilot offered SMUD commercial customers the opportunity to receive solar power without upfront costs or equipment installation through 5-, 10- or 20-year purchase contracts. Customers that entered into purchase contracts under the SolarShares Pilot receive up to half of their power from a utility-scale solar system. SMUD supplies solar power for the SolarShares Pilot either by building and maintaining utility-scale solar systems or by procuring solar power from third parties through power purchase agreements. The SolarShares Pilot generation was approximately 3.2% of retail sales in 2023. As of April 30, 2021, SMUD had completed the SolarShares Pilot and is not entering into new purchase contracts under the SolarShares Pilot.

Since January 2020, the California Building Code has required all newly constructed residential buildings under three stories to be powered by photovoltaic solar systems. A new home satisfies this requirement if it installs on-site solar or participates in an approved community solar or energy storage program. In February 2020, SMUD obtained approval from the California Energy Commission (“CEC”) to administer its own community solar program, called Neighborhood SolarShares® (“Neighborhood SolarShares”). SMUD’s Neighborhood SolarShares program can be used by developers of new low-rise residential buildings to satisfy the mandatory solar requirement. See also “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Rooftop Solar Mandate*.” Starting in 2023, the California Building Code’s mandatory solar requirement extends beyond low-rise residential properties, and other changes to the California Building Code’s community solar regulations took effect. SMUD revised its program to align with the new regulations and, in May 2023, obtained approval from the CEC to continue offering its Neighborhood SolarShares compliance option to newly constructed low rise residential homes in its service territory.

In addition to the SolarShares Pilot and Neighborhood SolarShares, SMUD maintains a voluntary green energy pricing program called Greenergy® (“Greenergy”). The Greenergy program allows customers the opportunity to pay an additional amount per month to ensure that either all or part of their electricity comes from green or carbon free energy sources. In 2023, the program allocated Renewable Energy Credits (“RECs”) equivalent to approximately 4.2% of retail sales to its participating customers.

Energy Efficiency. To further assist customers in managing energy usage and reducing regional carbon emissions and air pollution, SMUD offers an extensive array of energy efficiency and building electrification programs and services including financial incentives, loans, energy audits and education. In addition, SMUD has partnered with local developers to incorporate energy efficiency and all-electric construction measures into new residential and commercial construction, which helps developers plan and design efficient, cost-effective and low or zero-emission buildings. As part of SMUD’s 2019 Integrated Resource Plan (“IRP”), SMUD set a goal for regional carbon emissions through transport and building

electrification that aims to reduce carbon emissions in buildings and transport by 64% over the next 20 years. SMUD’s focus on electrification is continued in the Zero Carbon Plan (defined and discussed below). SMUD was the first electric utility in the country to set its efficiency goals based on carbon reductions, allowing building electrification and energy efficiency to both count toward meeting SMUD’s efficiency goals. This is a significant opportunity, as converting a typical home today to all-electric saves more than three times the carbon emissions compared to doing a major energy efficiency upgrade alone to the same building. See “POWER SUPPLY AND TRANSMISSION – Projected Resources.”

Sustainable Power Supply and Transmission

Maintaining a sustainable power supply entails focusing efforts on researching, promoting and implementing new renewable energy technologies and sources to meet SMUD’s long-term commitment to reducing carbon emissions and providing a reliable energy supply. SMUD defines a sustainable power supply as one that reduces SMUD’s GHG emissions to serve retail customer load to zero by 2030. See “– 2030 Zero Carbon Plan” below. SMUD is planning to achieve zero GHG emissions to serve retail customer load through investments in energy efficiency, clean distributed energy resources, renewables portfolio standard (“RPS”) eligible renewables, energy storage, large hydroelectric generation, clean and emissions free fuels, carbon capture and sequestration, and new technologies and business models. Additionally, SMUD plans to continue pursuing GHG emissions reductions through vehicle, building and equipment electrification. At the same time, SMUD’s plans for maintaining a sustainable power supply include assuring the reliability of SMUD’s electric system, minimizing environmental impacts on land, habitat, water and air quality, and maintaining competitive rates relative to other electricity providers in the State.

A number of bills affecting the electric utility industry have been enacted by the State Legislature. In general, these bills regulate GHG emissions and encourage greater investment in energy efficiency and sustainable generation alternatives, principally through more stringent RPS. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings” herein.

2030 Zero Carbon Plan. In July 2020, the Board declared a climate emergency and adopted a resolution calling for SMUD to take significant and consequential actions to reduce its carbon footprint by 2030. On April 28, 2021, the Board approved SMUD’s 2030 Zero Carbon Plan (the “Zero Carbon Plan”). The Zero Carbon Plan is intended to be a flexible roadmap for SMUD to eliminate carbon emissions from its electricity production by 2030 while maintaining reliable and affordable service. To achieve these goals the Zero Carbon Plan is focused on four main areas: natural gas generation repurposing, proven clean technologies, new technologies and business models and financial impacts and options. SMUD plans to revisit the Zero Carbon Plan annually.

The natural gas generation repurposing focus of the Zero Carbon Plan calls for exploring the replacement of two of SMUD’s five Local Gas-Fired Plants (as defined herein) and the retooling of the other three Local Gas-Fired Plants. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Local Gas-Fired Plants.*” Based on SMUD’s studies to date, SMUD estimates that McClellan (as defined herein) and the Campbell Soup Project (as defined herein) can be replaced in the next several years depending on SMUD’s success with replacement resources. Final decisions about the replacement of these two Local Gas-Fired Plants will be based on additional reliability studies and engagement with the community. As part of the Zero Carbon Plan, SMUD is also exploring converting the Carson Project (as defined herein) and the Procter & Gamble Project (as defined herein) to reliability use operations only and investigating the use of alternative fuels like Renewable Natural Gas-biomethane (RNG-biomethane), hydrogen and other biofuels for the Carson Project, the Procter & Gamble Project, and the Consumnes Power Plant (as defined herein). In addition, SMUD is investigating new technologies such as long duration energy storage, carbon capture and sequestration, hydrogen and other clean fuel alternatives to help support

the reduction of GHG emissions in SMUD’s energy supply. All final generator configurations are subject to reliability assessments.

The proven clean technologies focus of the Zero Carbon Plan calls for SMUD to procure approximately 1,100 to 1,500 MW of utility-scale solar photovoltaic (“PV”) generating capacity, 700 to 1,100 MW of local utility-scale battery storage, 300 to 500 MW of wind generating capacity, and 100 to 220 MW of geothermal generating capacity. The Zero Carbon Plan also estimates that customer installation of approximately 500 to 750 MW of behind-the-meter solar PV generating capacity and approximately 50 to 250 MW of behind-the-meter battery storage will assist SMUD with achieving the Zero Carbon Plan goals.

With respect to new technologies and business models, the Zero Carbon Plan focuses on evaluating, prioritizing and scaling the emerging technologies that SMUD expects will have the largest impact on reducing carbon in SMUD’s 2030 resource mix. SMUD is currently focused on various areas of technology and customer-focused programs, including electrification, education, demand flexibility, virtual power plants, vehicle-to-grid technology, and new grid-scale technologies. The Zero Carbon Plan forecasts that customer-owned devices and SMUD customer-focused programs will contribute between 360 and 1,300 MW of capacity to SMUD’s grid by 2030.

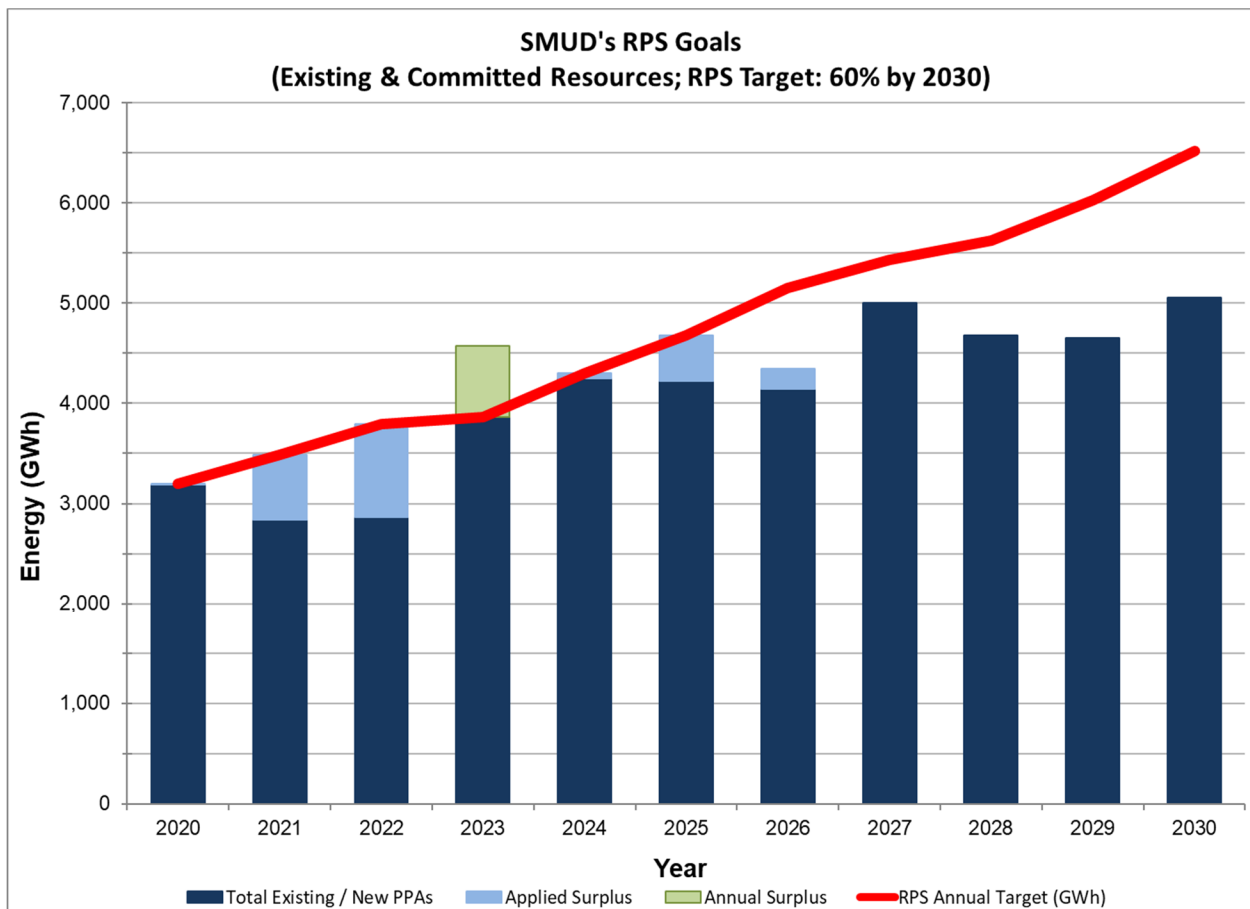
The financial impacts and options focus of the Zero Carbon Plan aims to keep SMUD rate increases at or below the rate of inflation while achieving SMUD’s goal of eliminating carbon emissions from its power supply by 2030. To pay for the expected costs of the Zero Carbon Plan and keep rate increases at or below the rate of inflation, the Zero Carbon Plan estimates the need for SMUD to realize between \$50 million and \$150 million of sustained annual savings. SMUD currently plans to achieve these sustained annual savings by exploring the implementation of operational savings strategies and pursuing partnership and grant opportunities.

While the ultimate impacts of the Zero Carbon Plan on SMUD’s financial results and operations are difficult to predict and are dependent on a variety of factors, such as the relative cost of procuring energy from clean technologies, the availability and relative cost of new technologies, and the adoption and implementation of energy efficiency and other measures by SMUD’s customers, such impacts could be material.

Renewable Energy and Climate Change. The California Renewable Energy Resources Act, established by Senate Bill X1-2 (“SBX1-2”) and the Clean Energy and Pollution Reduction Act of 2015, enacted by Senate Bill 350 (“SB 350”) require that SMUD meets 33% of its retail sales from RPS-eligible renewable resources by 2020 and 50% of its retail sales from RPS-eligible renewable resources by 2030. Senate Bill 100 (“SB 100”), passed by the legislature and approved by then-Governor Brown on September 10, 2018, accelerates the RPS targets and establishes a new 60% target by 2030. The bill also created a planning goal to meet all of the State’s retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Renewables Portfolio Standards*” for a discussion of the State RPS requirements.

SMUD’s compliance with State RPS requirements is evaluated over 3- or 4-year compliance periods. SMUD met the State RPS requirements for the first compliance period (2011-2013) and second compliance period (2014-2016). The third compliance period (2017-2020) required SMUD to source one-third of its energy from renewable resources, and SMUD had sufficient RECs to meet the third compliance period requirements. SMUD filed its 2020 and third compliance period RPS compliance report with the CEC in the second quarter of 2021 and the CEC adopted SMUD’s third compliance period verification report in December 2023. SMUD expects the confirmation letter from the CEC indicating that SMUD was

in full compliance with its third compliance period RPS obligations in the first quarter of 2024. As of the end of the third compliance period (2020), SMUD had approximately one million surplus RECs available to help meet future RPS targets. SMUD expects to file its 2023 RPS compliance report by July 1, 2024, showing that SMUD will have provided approximately 50% of its retail sales from RPS-eligible renewable resources in 2023, which is greater than the interim 2023 RPS target of 41.25%. RPS compliance is determined by compliance period and not by individual years and SMUD anticipates having sufficient surplus procured and/or under contract resources in the fourth compliance period (2021-2024) to be in compliance with the RPS requirements. In addition to meeting RPS standards, SMUD serves an additional 7.4% of its customer load with renewable energy through its voluntary SolarShares and Greenergy pricing programs described above. SMUD estimates that it has sufficient renewable energy deliveries, new power supply contract commitments, new power supply commitments under active discussion, and RPS-eligible surplus carryover to meet its RPS requirements through 2025. Additional resources have been identified that are expected to provide sufficient RPS-eligible resources to cover most of SMUD’s RPS requirements through 2030. Future solicitations may be needed to fill any remaining gaps. The following chart illustrates SMUD’s current RPS requirements through 2030 and its existing and committed resources utilized to meet those requirements.



In addition to procuring new sources, meeting the RPS requirements will require replacement of certain existing renewable contracts which expire in future years. While SMUD anticipates it will meet much of its renewable resource requirements through purchase contracts with third parties, it continues to explore additional options, including wind, solar, biomass, and geothermal developments, partnering with other utilities on future projects, and local development options. SMUD’s resource forecast (see “POWER SUPPLY AND TRANSMISSION – Projected Resources”) accounts for future renewable resources as a component of “Uncommitted Purchases.” To meet SMUD’s Zero Carbon Plan goals, SMUD anticipates meeting loads in 2030 with approximately 70-80% renewable resources, in addition to hydro and other new zero carbon technologies. See “– 2030 Zero Carbon Plan” above.

Given the intermittent nature of power from renewable resources such as wind and solar, SMUD is exploring and investing in options that provide the flexibility to manage the intermittency of such renewable resources. Potential options include energy storage resources, which SMUD has committed to as part of the Zero Carbon Plan, and expanding load management resources. Additionally, on April 3, 2019, SMUD, through its membership in BANC, a joint exercise of powers agency formed in 2009, and currently comprised of SMUD, the Modesto Irrigation District (“MID”), the City of Roseville (“Roseville”), the City of Redding (“Redding”), the City of Shasta Lake and the Trinity Public Utilities District, commenced participation in the California Independent System Operator Corporation (“CAISO”) western energy imbalance market (“WEIM”). Participation in the WEIM benefits SMUD by providing it with broader access to balancing resources within the region to help manage its expanding renewable portfolio. In addition, other entities within the BANC Balancing Authority Area began participation in the WEIM on March 25, 2021. See “BUSINESS STRATEGY – Serving SMUD’s Customers – *Operational Independence and Local Control*” and “POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.”

In 2022, SMUD’s Board formally adopted the 2030 Zero Carbon Plan as SMUD’s updated IRP. SMUD filed the approved IRP update with the CEC on September 14, 2022, pursuant to the CEC’s IRP guidelines, which called for updating SMUD’s IRP filing within five years of SMUD’s previous filing of April 29, 2019. SMUD’s Zero Carbon Plan built upon the April 2019 IRP and set a goal of zero carbon emissions by 2030. SMUD’s next formal IRP process is expected to be completed and filed with the CEC in 2027. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *2030 Zero Carbon Plan*.”

The State’s carbon cap-and-trade market established pursuant to Assembly Bill 32 (“AB 32”) began in 2013. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Greenhouse Gas Emissions*” for a discussion of AB 32 and the State’s cap-and-trade program. SMUD anticipates that allowances allocated to SMUD will nearly equal SMUD’s compliance obligations under normal water year conditions. Under low water year conditions, SMUD may need to purchase additional allowances to cover its compliance obligations, including carbon obligations related to wholesale energy sales from SMUD’s natural gas power plants. As SMUD implements its clean power goals, SMUD expects its need for these allowances to decline.

There is scientific consensus that increasing concentrations of GHG have caused and will continue to cause a rise in temperatures in the State and around the world. The change in the earth’s average atmospheric temperature, generally referred to as “climate change,” is, among other things, expected to result in a wide range of changes in climate patterns, including increases in the frequency and severity of extreme weather events, including droughts and heat waves, more frequent incidences of wildfires, changes in wind patterns, sea level rise and flooding, any of which alone or in combination could materially adversely affect SMUD’s financial results or operations. See also “FACTORS AFFECTING THE REGION” and “OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY – Other Factors.” As described above, SMUD is actively working to meet its sustainable power supply goals,

reduce its own GHG emissions, and assist the local governments in the territory it serves with their desired GHG reductions. In 2016, SMUD introduced the Pilot Natural Refrigerant Incentive Program, its first customer program providing incentives for GHG reduction in addition to kWh savings. SMUD is a founding member and active participant in the Capital Region Climate Readiness Collaborative, a public private partnership formed to better understand and plan for climate impacts expected in the region. SMUD is also an active member of the United States Department of Energy (the “DOE”) Partnership for Energy Sector Climate Resilience. SMUD regularly reviews scientific findings related to climate change and in 2016 published its Climate Readiness Assessment and Action Plan. In 2024, SMUD is planning to update the Climate Readiness Assessment and Action Plan along with other climate resiliency actions.

Energy Storage Systems. Assembly Bill 2514 (“AB 2514”) requires the Board to re-evaluate energy storage goals every three years. In compliance with AB 2514, the Board established a target of 9 MW of energy storage procurement by December 31, 2020, which SMUD has procured. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Energy Storage Systems*” for further discussion of AB 2514. In September 2020, the Board directed that energy storage forecasts be implemented through SMUD’s IRP process going forward. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*” above for a discussion of SMUD’s IRP. SMUD is also evaluating how to couple utility-scale solar with utility-scale storage to support future system reliability needs and renewable energy goals.

Meeting Peak Load. A significant consideration for SMUD will be how it addresses its system peak load. SMUD has implemented programs and tools, such as advanced metering, energy efficiency options, and TOD rates for residential customers, to help customers manage their costs while helping SMUD reduce its peak load. Analysis of 2022 data showed a reduction of approximately 108 MW, weather adjusted, for residential customers during the TOD peak period (5-8 p.m. local time). SMUD staff will continue to monitor the progress and results of the implementation of TOD rates and will use this information to inform future rate actions and load forecasts. See “BUSINESS STRATEGY – Serving SMUD’s Customers – *Time-of-Day Rates.*”

On September 16, 2021, the Board approved an optional residential Critical Peak Pricing rate (the “Peak Pricing Rate”), which went into effect June 1, 2022. The Peak Pricing Rate is designed to reduce load by increasing the price of energy when the grid is most impacted, up to 50 hours per summer. In exchange, customers on the rate will receive a per kWh discount on summer Off-Peak and Mid-Peak rates. SMUD is also exploring the use of more distributed energy resources and demand response programs that could further reduce SMUD’s system peak.

Operational Independence and Local Control. A key component of SMUD’s business strategy is focused on maintaining its independence in operating and maintaining its resources. As such, SMUD has taken a number of actions to mitigate the potential impacts of various federal and state regulatory actions. For example, in 2002 SMUD established itself as an independent control area (now termed “Balancing Authority”) within the Western Electricity Coordinating Council (“WECC”) region. By removing itself from CAISO’s Balancing Authority area, SMUD became responsible for balancing electric supply and demand within its own service territory. This move substantially reduced fees paid to CAISO, preserved operational flexibility and helped to insulate SMUD from the uncertain regulatory environment and tariff structure of CAISO. In addition to decreased financial risks, this independence also reduced SMUD’s exposure to the impacts of capacity and energy shortages in the CAISO Balancing Authority area. Further, as an independent Balancing Authority, SMUD continued to support the statewide electric grid in events of electrical emergencies requiring rotating outages, such as loss of major transmission lines or equipment, as provided in the statewide emergency plan. By 2006, the SMUD Balancing Authority footprint expanded north to the California-Oregon border and south to Modesto, to include the service areas of the WAPA, MID, Redding and Roseville, and TANC-owned 340-mile 500-kV California-Oregon Transmission Project

(“COTP”). In October 2009, SMUD, with the coordination and cooperation of WAPA, joined the Western Power Pool Reserve Sharing Group, which supports reliability and reduces operating costs. In May 2011, BANC assumed the role of the Balancing Authority, though SMUD continues to oversee operation of the grid on behalf of BANC. BANC members share cost responsibility for balancing authority-related compliance obligations, liabilities, and operations. BANC also serves as an important venue for SMUD and other BANC members to collaborate with respect to operational and market improvements inside the BANC footprint and to preserve their operational independence. See “POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.” On April 3, 2019, SMUD, through its participation in BANC, began operating in the CAISO WEIM, which helps SMUD better manage the integration of renewable energy resources. The CAISO WEIM is a voluntary market, which allows SMUD to maintain its operational independence from the CAISO, while providing SMUD greater access to balancing resources throughout the western region. See “POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.”

Electricity, Natural Gas, and Related Hedging

SMUD continues to utilize a comprehensive and integrated power and fuel supply strategy to acquire a reliable and diversified portfolio of resources to meet existing and future needs. This strategy includes a combination of both physical supply and financial hedging transactions to reduce price risk exposure over a five-year horizon. SMUD’s physical supply arrangements include ownership of power generating resources, as well as a diversified portfolio of power and fuel supply purchase contracts that range in duration, with a mixture of fixed and variable pricing terms.

With regard to the power purchase contracts, SMUD has entered into a series of contracts for the purchase of electricity to supply the portion of its resource needs not already provided by owned resources. SMUD also actively manages its exposure on variable rate electricity purchases, and at times may enter into financial contracts to fix prices by using options to reduce price risk, in each case when warranted by economic conditions. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements.”

With regard to fuel supply contracts, SMUD utilizes a similar strategy of employing financial contracts of various durations to hedge its variable rate fuel supply contracts. As of February 29, 2024, these contracts are forecasted to have hedged the price exposure on approximately 100%, 82% and 81% of SMUD’s anticipated natural gas requirements for 2024, 2025 and 2026, respectively. While the financial effects resulting from the unhedged portions of SMUD’s natural gas requirements are difficult to predict, SMUD’s financial results could be materially impacted. See “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Supply*.”

As provided in SMUD’s natural gas contracts, SMUD may be required to post collateral to various counterparties. As of February 29, 2024, SMUD did not have any collateral posting obligations. A decrease in natural gas prices could result in a collateral posting by SMUD. While the posting of collateral is not an expense for SMUD, it does temporarily encumber unrestricted cash balances.

To hedge against hydroelectric production volatility of SMUD-owned hydroelectric facilities, SMUD implemented a pass-through rate component called the Hydro Generation Adjustment (the “HGA”), and established a Hydro Rate Stabilization Fund (the “HRSF”). Similarly, to hedge against hydroelectric production volatility of non-SMUD-owned hydroelectric facilities, SMUD implemented a HGA and established a WAPA Rate Stabilization Fund (“WRSF”). These rate stabilization funds and rate pass through mechanisms help to offset increased power supply or fuel supply costs in years where precipitation levels at SMUD-owned and non-SMUD-owned hydroelectric facilities are low. See “RATES AND CUSTOMER BASE – Rate Stabilization Funds.”

Managing Risks

SMUD maintains an Enterprise Risk Management (“ERM”) program, a strategic approach to managing enterprise-wide risks as a portfolio, to help reduce the chance of loss, create greater financial stability and protect SMUD resources. It is designed to maintain an early warning system to monitor changes in, and the emergence of, risks that affect the organization’s business objectives. Under the purview of the Enterprise Risk Oversight Committee, composed of executive members and chaired by the Chief Financial Officer, ERM conducts ongoing risk identification, assessments, monitoring, mitigation, risk-based budgeting and reporting. To ensure accountability and oversight, each identified risk is assigned to an executive-level risk owner. Risk status and mitigation efforts are reported monthly to the Board.

Competitive Challenges

In the coming decade, utilities like SMUD may face competition from companies in other industries looking to diversify into the energy sector. Examples of developing competitive areas include retail sale of electricity, distributed electric storage resources, renewable distributed generation (mostly solar in Sacramento), customer installation of fuel cells, third-party electric vehicle charging, home or business automation that enables greater customer participation in energy markets, and third-party provision of energy management software and solutions.

SMUD has a wide range of initiatives to monitor and adapt to changing market conditions and new industry participants. Key areas of focus include:

- Enhancing customer experience. Recognizing the importance of meeting customer expectations, SMUD introduced the Customer Experience Strategy in 2016 to provide customers “value for what they pay” and further strengthen customer loyalty. The initiative is focused on ensuring SMUD has the people, systems, technology, programs and services to consistently meet or exceed customers’ changing expectations. The customer experience is measured via surveys with the goal of achieving 80% of customers agreeing that SMUD provides them with value for what they pay by 2030.
- Restructuring electric rates. In 2017, the Board approved TOD rates as the standard rate for residential customers. The residential rate transition began in the fourth quarter of 2018, and the full transition was completed in the fourth quarter of 2019. All of SMUD’s business customers are also on time-based rates. In 2019, the Board approved a restructuring of commercial rates to collect a greater portion of fixed costs through fixed charges and to better align time periods and prices with energy markets. The transition was completed in the first quarter of 2022. See “RATES AND CUSTOMER BASE – Rates and Charges” and “FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic.”
- Ongoing integrated resource planning. SMUD monitors and updates its integrated resource planning to ensure future sources of energy balance cost, reliability and environmental requirements with the flexibility to meet challenges of changing market and regulatory conditions, customer energy resources, and emerging technologies.

Leveraging Core Competencies

In addition to these initiatives, SMUD is leveraging core competencies to improve industry safety and help communities serve their customers’ energy needs.

Sacramento Power Academy. The Sacramento Power Academy is SMUD’s operational training center providing training support for all of SMUD’s skilled trades professionals. Operating on a 10-acre training facility the academy oversees SMUD’s 14 skilled trades apprenticeships. The academy’s experienced training professionals serve as liaisons and mentors to apprentices progressing through on-the-job training, program testing, night schooling, and extensive training components. The academy also ensures SMUD’s skilled trades professionals are safe and compliant by coordinating and delivering annual regulatory and safety training. The academy is also a workforce development hub utilized by SMUD to increase awareness of and interest in skilled trades careers at SMUD, in SMUD’s community, and in the utility industry.

Community Energy Services. In 2002, Assembly Bill 117 was passed to establish Community Choice Aggregation in the State by authorizing Community Choice Aggregators (“CCAs”) to aggregate customer electric load and purchase electricity for customers. SMUD’s Community Energy Services department was established in 2017 to support organizations with values closely aligned with SMUD’s values, while also generating additional revenue for SMUD. CCA programs are proliferating in the State thanks to support for expanding renewable energy use and desire for local control particularly for electricity procurement. There are numerous CCAs operating in the State, and more are anticipated to launch in the future. CCAs are responsible for procuring wholesale power, setting the generation rate, and staffing a call center to handle opt-outs and questions about the power portfolio. The local investor-owned utility (“IOU”) continues to deliver electricity from the electric grid, maintain its electric infrastructure, bill customers and collect payments.

In October 2017, SMUD was selected by the governing board of Valley Clean Energy (“VCE”) to provide technical, energy and support services, including data management and call center services, wholesale energy services, and business operations support, to VCE for a five-year term expiring May 31, 2023. SMUD and VCE recently executed a new contract for data management, contact center, consulting and debt collection services that expires on December 31, 2028. VCE is a joint powers agency formed in 2016 by the City of Woodland, the City of Davis and Yolo County to implement a local CCA program. The service territory expanded to include the City of Winters in 2021. The mission of VCE is to deliver cost-competitive clean electricity, product choice, price stability, energy efficiency, and greenhouse gas emissions reductions to its customers in Yolo County. VCE began electric services to its customers in the summer of 2018, giving Yolo County residents a choice between two electricity providers, VCE and PG&E.

In November 2017, SMUD was selected by the governing board of East Bay Community Energy (“EBCE”) to provide call center and data management services for a three-year term beginning in January 2018. SMUD signed a new contract with EBCE in January 2022 for call center and data management services for an additional three-year term. EBCE recently changed its name to Ava Community Energy (“Ava”). Ava is a joint powers agency formed in 2016 by the cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Oakland, Piedmont, San Leandro and Union City in Alameda County to implement a local CCA program. Ava expanded its territory to the cities of Pleasanton, Newark, and Tracy in April 2021.

In June 2019, SMUD was selected by the governing board of Silicon Valley Clean Energy (“SVCE”) to provide program services to help local SVCE communities reduce carbon pollution while delivering engaging customer experiences. SVCE programs are focused on grid integration, as well as electrifying transportation, buildings and homes. This contract was extended through September of 2024. In June 2023, SMUD was selected through a competitive process as SVCE’s concierge service vendor for three years. In December 2023, SMUD was again selected through a competitive process as SVCE’s programs administrator for five years. SVCE is a joint powers agency formed in 2016 by the cities of Campbell, Cupertino, Gilroy, Lost Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill,

Mountain View, Saratoga, Sunnyvale and Unincorporated Santa Clara County to implement a local CCA program.

In July 2022, SMUD was selected by the governing board of Marin Clean Energy (“MCE”) to provide data management, billing, data analytic and system assessment services to MCE. MCE is a joint powers agency formed in 2010 and represents 37 member communities across four Bay Area counties: Contra Costa, Marin, Napa and Solano.

In September 2022, SMUD was selected through a competitive process by the governing board of Sonoma Clean Power (“SCP”) to provide market research services to SCP. In January of 2023, SMUD was selected to provide strategic consulting services, providing recommendations related to programs and marketing. SCP is a joint powers agency that serves Sonoma and Mendocino counties.

While CCAs have had success in the State, they are susceptible to business, regulatory and other risks that could lead to a financial loss and/or result in a cessation of operations for the CCA. These risks could extend to a CCA’s counterparties, including SMUD. SMUD has made an effort to identify and mitigate potential counterparty risks to the extent possible in service agreements with the CCAs described above. SMUD may pursue opportunities to provide similar services to additional CCAs in the future. SMUD management does not expect its current arrangements to have a material adverse impact on SMUD’s financial position, liquidity or results of operations.

FACTORS AFFECTING THE REGION

Precipitation Variability

SMUD uses a precipitation measuring station located at Fresh Pond, California to approximate available water supply to SMUD’s Upper American River Project (the “UARP”) hydropower reservoirs. As of January 31, 2024, precipitation at Fresh Pond, California totaled 21 inches for the October-September hydropower water supply period. This is 75% of the 50-year rolling median of 28 inches. Total reservoir storage in the UARP hydropower reservoirs was 238 thousand acre-feet as of January 31, 2024, which was about 63% of capacity and approximately 6% above the historical average. SMUD manages its reservoirs to maximize water storage going into the summer season, which preserves generating capacity during SMUD’s high load months and ensures that SMUD meets its UARP FERC license requirements, including requirements for recreational and environmental flows.

There can be wide swings in precipitation from year to year. In years with below average rainfall, SMUD may have to generate or purchase replacement energy at additional cost. To hedge against variations in the volume of energy received from SMUD-owned UARP hydroelectric resources, SMUD uses the HRSF to help offset increased power supply or fuel supply costs. See “RATES AND CUSTOMER BASE – Rate Stabilization Funds.”

SMUD is also exposed to precipitation variability through its contract with the WAPA. In an average water year this contract provides roughly 661 gigawatt hours (“GWh”) of power. WAPA’s actual deliveries are based on hydroelectric generation (minus energy use for pumping) at Central Valley Project reservoirs in Northern California, which varies based on annual precipitation patterns, water deliveries for agriculture, and flow requirements in the Sacramento-San Joaquin River Delta. Unlike the UARP, SMUD does not monitor precipitation stations to approximate power deliveries under the WAPA contract, and instead relies on a forecast of power deliveries from WAPA. As of January 31, 2024, WAPA has forecasted power deliveries of 703 GWh for 2024, approximately 6% more than an average water year. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – *Western Area Power Administration.*”

Wildfires

General. Wildfires in the State have become increasingly common and destructive. Frequent drought conditions and unseasonably warm temperatures have increased, and could further increase, the possibility of wildfires occurring in areas where SMUD maintains generation, transmission and distribution facilities. The number of diseased and dead trees has increased, and could further increase, this possibility. As a result, SMUD faces an increased risk that it may be required to pay for wildfire related property damage or personal injuries, fines and penalties, some of which may not be covered by insurance (including costs in excess of applicable policy limits), or may be disputed by insurers, and could be material. In addition, a significant fire or fires in SMUD’s generation, transmission or service area could result in damage or destruction to SMUD’s facilities, result in a temporary or permanent loss of customers or otherwise materially increase SMUD’s costs or materially adversely affect SMUD’s ability to operate its Electric System or generate revenues.

SMUD’s service territory is located within Sacramento County, which is located outside the California Public Utilities Commission (the “CPUC”) high fire threat areas established in 2018. However, as described below, SMUD’s UARP facilities and certain of SMUD’s and TANC’s transmission facilities are within CPUC high fire threat areas. In addition, as described below, certain portions of SMUD’s service territory are located within the California Department of Forestry and Fire Protection (“Cal Fire”) Fire Protection and Resource Assessment Program (“FRAP”) Moderate, High and Very High Fire Hazard Severity Zones. SMUD’s exposure to liability for damages related to its UARP facilities, which are located within high fire threat areas in El Dorado County, is reduced due to risk mitigation measures adopted by SMUD and the low number of inhabitants and structures near the UARP facilities (See “Wildfire Mitigation” below).

SMUD continues to take responsible action to minimize its exposure to liability from wildfires; however, under current State law, utilities can be held liable for damages caused by wildfires sparked by their equipment or other facilities regardless of whether the utility was negligent or otherwise at fault. PG&E and other major IOUs in the State have experienced credit rating downgrades as a result of potential wildfire liability exposure, which may have implications for the electric market generally. At this time the full extent of SMUD’s potential exposure to wildfire risk is unknown.

Distribution (SMUD Service Territory). State law requires Cal Fire to classify areas in the State based on the severity of the fire hazard that is expected to prevail there. These areas or “Fire Hazard Severity Zones” are based on factors such as fuel (material that can burn), slope and the expected chance of burning. There are three Fire Hazard Severity Zones (Moderate, High and Very High) based on increasing fire hazard. Portions of SMUD’s service territory are located within these Fire Hazard Severity Zones. SMUD has assessed its service territory based on Cal Fire’s FRAP map, adopted in 2007; the following table illustrates SMUD’s assessment of the approximate extent of its service territory and retail customer base located within the three Fire Hazard Severity Zones as of March 2019.

Fire Hazard Severity Zone	Moderate	High	Very High
Acres of SMUD Service Area	231,816	2,337	1,061
% of Total SMUD Service Area	40.6%	0.4%	0.2%
Number of Retail Customers	53,621	4,285	148
% of Total Retail Customers	7.7%	0.6%	0.0%

Transmission (Outside of SMUD Service Territory). In 2018, the CPUC approved a new statewide fire map that identifies areas of elevated and extreme wildfire risk from utility-associated assets located throughout the State. SMUD directly participated in the development of the CPUC’s statewide fire map. In connection with the development of the CPUC’s statewide fire map, a peer review and a team of independent nationwide experts led by Cal Fire affirmed that SMUD’s electric service area is properly located outside of these elevated (“Tier 2”) and extreme (“Tier 3”) high fire threat areas; however, SMUD’s UARP facilities are located within both Tier 2 and Tier 3 areas. According to the CPUC, Tier 2 fire-threat areas are areas where there is an elevated wildfire risk from utility assets and Tier 3 fire-threat areas are areas where there is an extreme risk from utility assets. As of June 8, 2021, approximately 37 right-of-way miles of SMUD’s transmission lines are in Tier 2 fire-threat areas and approximately 19 right-of-way miles of SMUD’s transmission lines are in Tier 3 fire-threat areas. SMUD is also a member of TANC. As of July 2022, approximately 116.3 right-of-way miles of TANC’s transmission lines are in Tier 2 fire-threat areas and approximately 4.5 right-of-way miles of TANC’s transmission lines are in Tier 3 fire-threat areas. In accordance with its FERC license, SMUD adheres to a FERC-approved Fire Prevention and Response Plan for its UARP facilities. On May 17, 2018, in accordance with State law, SMUD’s Board of Directors determined that the UARP area may have a “significant risk of catastrophic wildfire” resulting from overhead electric facilities and that SMUD’s FERC-approved UARP Fire Prevention and Response Plan meets requirements for presenting wildfire mitigation measures to the Board for its approval.

Wildfire Mitigation. In response to potential wildfire risk, SMUD has implemented and is continuing to implement a series of measures intended to prevent wildfires from occurring, minimize the spread of any fire that does occur and improve the resiliency of its system. These measures include an increase in the degree of sophistication of fuel reduction inside and adjacent to rights-of-ways; installation of Cal Fire-approved exempt material to reduce the risk of sparking; enhanced inspection and maintenance programs; increased use of ignition-resistant construction, including covered conductors and undergrounding of conductors; increased monitoring of and identified responses to fire conditions, including operational procedures for the de-energization of lines during high fire conditions; and elimination of automatic reclosers on SMUD’s transmission lines and on SMUD’s distribution lines in certain areas during fire season.

SMUD’s proactive approach to vegetation management has been expanded to include the use of advanced technologies such as Light Detection and Ranging (“LiDAR”), ortho and oblique imagery that is used to pinpoint tree health and/or condition that may not yet be visible to the naked eye. In addition, SMUD has installed additional weather stations in transmission corridors and substations for increased situational awareness and has continued coordination and collaboration with local agencies and first responders as well as vulnerable populations.

State legislation enacted in 2018 and 2019 (SB 901 and AB 1054, respectively) requires publicly owned utilities (“POUs”) to prepare and present Wildfire Mitigation Plans to their governing boards by January 1, 2020, and annually thereafter. SB 901 requires POUs, including SMUD, before January 1, 2020, and annually thereafter, to prepare a wildfire mitigation plan and present it in a public meeting to their governing board. SB 901 requires POU’s to accept comments on the wildfire mitigation plan from the public, other local and State agencies, and interested parties, and to verify that the plan complies with all applicable rules, regulations, and standards, as appropriate. The bill requires a qualified independent evaluator to review and assess the comprehensiveness of its wildfire mitigation plan and present its report to the board in a public meeting. AB 1054 created a new Wildfire Safety Division within the CPUC to prioritize wildfire safety throughout the State, and established an appointed Wildfire Safety Advisory Board (“WSAB”) to advise and make recommendations relating to wildfire safety to this new Division. For POUs, the bill requires submittal of annual wildfire mitigation plans to the WSAB for review and advisory opinions relating to the content and sufficiency of the plans.

SMUD assembled an enterprise-wide team of subject-matter experts to prepare its plan in compliance with this legislation. SMUD's initial Wildfire Mitigation Plan ("WMP") was adopted by the Board in the fourth quarter of 2019, after circulation for public comment and review of the comprehensiveness of the plan by a qualified independent evaluator. The WMP and evaluator's report were submitted to the WSAB in 2020.

SMUD reviews its WMP each year, presenting the updated plan to the Board for adoption at duly noticed public meetings. The updated plans and evaluator reports are submitted to the WSAB for advisory opinion and recommendations. SMUD responds to the WSAB's comments regarding SMUD's WMP as part of its WMP process. SMUD will continue to annually review and update its WMP, conducting a comprehensive review at least every third year.

SMUD recently completed a comprehensive review and update of its WMP after soliciting public input and independent evaluation. The 2023-2025 WMP was adopted by the Board on June 15, 2023, and duly submitted to the WSAB.

Wildfire Insurance. Wildfires both in California and nationally have not only increased potential liability for utilities, but have also adversely impacted the insurance markets, leading to higher costs for coverage; coverages becoming prohibitively expensive; limited or restricted coverage to certain types of risks; or coverage at insufficient levels. SMUD most recently renewed its general and wildfire liability insurance coverage on June 15, 2023, increasing the coverage limit by \$25 million to \$275 million. SMUD increased the commercially insured portion of its wildfire coverage program from \$176 million to \$212.5 million and maintained the self-insured layers and quota share portions of the coverage at \$62.5 million.

In addition, it is expected that SMUD will have a portion of the \$500 million aggregate principal amount of its commercial paper and line of credit program to provide operational flexibility in the event of the occurrence of a wildfire or other operational event. However, SMUD has not covenanted to maintain the availability of the commercial paper program and line of credit program for these purposes and no assurances can be given that the commercial paper and line of credit program will be available at the time of, or during, such an event.

August 2020 Heat Wave

The State experienced a period of prolonged above average temperatures from August 14, 2020 through August 18, 2020. The CAISO was forced to institute rotating electricity outages in the State during this extreme heat wave. SMUD, as a member of BANC, and being outside of the CAISO did not have to implement any planned power disruptions. Additionally, SMUD was able to support the CAISO during some hours of the heat wave with both requested emergency assistance and wholesale market sales. SMUD's peak demand between August 14, 2020 and August 18, 2020, varied between 2,874 MW and 3,057 MW, well below SMUD's record peak of 3,299 MW.

September 2022 Heat Wave

The State experienced a period of prolonged above average temperatures from September 5, 2022 through September 8, 2022. On September 6, 2022, SMUD experienced its second highest peak demand of 3,263 MW. SMUD did not have to implement any planned power disruptions.

Storm Damage

In January 2023, SMUD experienced a series of winter storms that brought heavy rains and high winds causing damage to SMUD's grid and widespread outages for SMUD's customers. By the time the

storm response was complete, SMUD had experienced the largest mobilization of personnel and restoration crews in its history. SMUD incurred costs related to removing downed trees, restoring power from downed poles and broken lines, replenishing inventory, communicating with and providing assistance to customers, maintaining IT systems, and coordinating with local emergency agencies. SMUD is pursuing claims with Federal and State agencies to attempt to recover certain of SMUD's costs related to the storms. The material financial impacts have been reflected in SMUD's audited financial statements for the years ended December 31, 2023 and December 31, 2022, [which are included in APPENDIX B].

Cosumnes Power Plant Outage

On June 5, 2022, the Cosumnes Power Plant (as defined herein) was shut down due to a ground fault in the Steam Turbine Generator ("STG") stator. The ground fault was caused by delamination of the insulation on one of the through bolts. Damage from the ground fault resulted in a full rewind and restack of the stator core, replacement of all stator through bolts, and a full rewind of turbine rotor. The Cosumnes Power Plant repairs were completed in February 2023 and the plant returned to service on March 5, 2023. During the extended outage, SMUD shifted generation to the other local gas-fired plants and the Sutter Energy Center and procured additional energy and resource adequacy capacity. SMUD also requested and received approval from the California Air Quality Board and California Energy Commission to operate one or both of the gas turbines without the STG. During the September 2022 heatwave, both of the gas turbines at the Cosumnes Power Plant were operated without the STG, providing 270 MW at peak.

To mitigate the financial impact of unplanned outages from its thermal assets, SMUD carries commercial property insurance with a business interruption endorsement. At the time of the loss, the coverage provided up to \$30.8 million of business interruption recovery per month at the Cosumnes Power Plant, with a sub-limit of \$310 million over any 18-month period. During the policy period, claims were subject to a \$5 million equipment damage deductible and a 60-day business interruption claims waiting period.

SMUD has settled the equipment damage portion of the loss for \$18.6 million, resulting in a \$13.6 million recovery. The business interruption portion of the claim remains in process, with SMUD receiving a \$50 million advance in December of 2022. As of January 2024, the carriers have confirmed an additional \$51 million in undisputed recovery, which is anticipated to be received in the first quarter of 2024. Thus far, SMUD has recovered \$114.6 million of the loss and will continue to work toward full settlement of the disputed portion of the claim, which is approximately \$68 million.

Impacts from COVID-19 Pandemic

While the impact of the COVID-19 pandemic on SMUD has lessened since the height of the pandemic in 2020, SMUD is still experiencing impacts from the pandemic. However, compared to weather adjusted load levels, SMUD's overall load is near or above pre-pandemic levels.

Part of the governmental response to the economic consequences of the pandemic required utility providers (including SMUD) to provide additional grace periods and flexible payment plans for the payment of utility bills or to refrain from pursuing collection remedies for unpaid bills for a period of time. SMUD also implemented a no-shutoff policy through January 2022 under which SMUD did not disconnect power to a customer for non-payment of their electric bill. Beginning in February 2022, SMUD resumed its normal payment, late fee, and disconnection process and began disconnections of unpaid accounts in late April 2022. As a result, SMUD has experienced an increase in delinquencies for customer electric accounts versus pre-pandemic levels. In December 2021, SMUD received \$41 million from the California Arrearage Payment Program ("CAPP") initial funding, and an additional \$9.9 million in 2022. All funds were applied to delinquent balances. As of December 31, 2023, the total delinquencies for customer electric

accounts were \$38.2 million, after the CAPP credit, which is an increase from the February 2020 balance of total delinquencies for customer electric accounts of \$16.9 million. The financial impacts stemming from delinquent accounts have been accounted for in SMUD's audited financial statements for the preceding years. Any successful recovery of delinquent accounts will contribute to an increase in net income.

SMUD also paused the recertification process for existing customers in SMUD's low-income discount program during the pandemic. The number of customers participating in the low-income assistance program increased by 16,407, or approximately 22% from February 2020 to December 2023. SMUD has resumed the recertification process for existing customers in the low-income discount program in 2023.

While the impacts of the COVID-19 pandemic on SMUD have lessened, if the pandemic and its consequences again become more severe or another similar event occurs, the impacts on SMUD's financial results and operations could be material.

RATES AND CUSTOMER BASE

Rates and Charges

SMUD's Board of Directors has autonomous authority to establish the rates charged for all SMUD services. Unlike IOUs and some other municipal utility systems, retail rate and revenue levels are not subject to review or regulation by any other federal, State or local governmental agencies. Changes to SMUD rates only require formal action by the Board of Directors after two public workshops and a public hearing. SMUD is not required by law to transfer any portion of its collections from customers to any local government. SMUD typically reviews and sets rates on a two-year cycle.

2019 Rate Action.

On June 24, 2019, the Board approved a 3.75% rate increase effective January 1, 2020, a 3.00% rate increase effective October 1, 2020, a 2.50% rate increase effective January 1, 2021, and a 2.00% rate increase effective October 1, 2021, for all customer classes. Additionally, the Board approved a restructuring of the commercial rates, including new time periods and an overall increase in the fixed bill components, such as the System Infrastructure Fixed Charge and demand charges, and a corresponding decrease in energy charges, making the restructuring revenue neutral by rate category. To minimize bill impacts, rate categories will be restructured over an eight-year period.

2021 Rate Action.

On September 16, 2021, the Board approved a 1.5% rate increase effective March 1, 2022 and a 2.0% rate increase effective January 1, 2023 for all customer classes. Additionally, the Board approved the Solar and Storage Rate, the optional residential Peak Pricing Rate, and updates to certain schedules of SMUD's Open Access Transmission Tariff ("OATT"). The Board also approved a new timeline for the commercial rate restructure transition, and all impacted commercial customers were transitioned to the new rates by the end of the first quarter of 2022.

SMUD also implemented a solar interconnection fee based on the size of solar interconnection and supporting programs such as battery incentives, incentives to enroll in SMUD's Peak Pricing Rate, battery incentives for Virtual Power Plants, and a program to bring the benefits of solar to under-resourced multi-family communities. These programs and fees are not subject to Board approval.

2023 Rate Action.

On September 21, 2023, the Board approved a 2.75% rate increase effective January 1, 2024, a 2.75% rate increase effective May 1, 2024, a 2.75% rate increase effective January 1, 2025, and a 2.75% rate increase effective May 1, 2025 for all customer classes. The Board also approved establishing the Energy Assistance Program Rate (“EAPR”) Rate Stabilization Fund, which will provide an additional discount to those low-income customers with the greatest need. The discount will be funded with discretionary, non-retail rate revenue, as to not have an impact on any future required rate changes. There is currently pending litigation concerning the adoption of the 2023 rates. See “LEGAL PROCEEDINGS – Proposition 26 Lawsuit.”

Rate Stabilization Funds

The Rate Stabilization Fund (“RSF”) is maintained by SMUD to reduce the need for future rate increases when costs exceed existing rates. At the direction of the Board, amounts may be either transferred into the RSF (which reduces revenues) or transferred out of the RSF (which increases revenues). The Board authorizes RSF transfers on an event driven basis. The RSF includes funds to hedge variations in the volume of energy received from WAPA hydroelectric generation, variation in AB 32 revenue and variations in Low Carbon Fuel Credit (“LCFS”) revenue. As of December 31, 2023, the balance in the RSF was \$115.8 million, which is approximately 7.2% of annual retail revenue.

Effective July 2008, SMUD implemented the HGA, which is a pass-through rate component to deal with variations in hydroelectric generation from the UARP (see “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Hydroelectric*”). The HGA is designed to increase revenues in dry years when SMUD must buy power to replace hydroelectric generation and return money to the HRSF in wet years when SMUD has more hydroelectric generation than expected. Each year SMUD determines the impact of precipitation variances on projected hydroelectric generation from the UARP. When the precipitation variance results in a deficiency of hydroelectric generation from the UARP, transfers from the HRSF, which was created as a component of the RSF, to SMUD’s available cash, will be made in an amount approximating the cost to SMUD of replacement power (up to 4% of revenues) until the balance in the HRSF is zero. When the precipitation variance results in a projected surplus of hydroelectric generation from the UARP, deposits will be made into the HRSF in an amount approximating the positive impact to SMUD from the surplus hydroelectric generation (up to 4% of revenues) until the balance in the HRSF is equal to 6% of budgeted retail revenue. If the balance in the HRSF is not sufficient to cover transfers that would otherwise be made in the event of a projected deficiency in UARP hydroelectric generation, a 12-month HGA surcharge will automatically be included on customers’ electric bills at a level that generates up to 4% of retail revenue. If the balance in the HRSF is equal to 6% of budgeted retail revenue on any precipitation variance calculation date and the precipitation variance results in a projected UARP hydroelectric generation surplus, the positive impact of the surplus may be used for other purposes at staff’s recommendation, with the approval of the Board, including returned to customers through an electric bill discount up to 4% of retail revenue. SMUD calculates HRSF transfers based on an April-March (water year) precipitation period at Fresh Pond, California. This precipitation station is used to approximate available water supply to SMUD’s UARP hydropower reservoirs. As of January 31, 2024, and based on the current HRSF water year precipitation forecast, SMUD anticipates transferring \$20.8 million out of the HRSF in April 2024.

In September 2023, SMUD added a pass-through rate component to deal with variations in hydroelectric generation from WAPA. Each year SMUD determines the WAPA Energy Delivery Variance (“EDV”) based on forecasted energy delivery minus the actual energy delivery. When the EDV variance is positive, transfers from the WRSF, which was created as a component of the RSF, to SMUD’s available cash, will be made in an amount approximating the cost to SMUD of replacement power (up to 2% of

revenues) until the balance in the WRSF is zero. If the balance in the WRSF is not sufficient to cover transfers that would otherwise be made in the event of a projected deficiency in WAPA hydroelectric generation, a 12-month HGA surcharge will automatically be included on customers' electric bills at a level that generates up to 2% of retail revenue. When the EDV variance is negative, deposits will be made into the WRSF in an amount approximating the positive impact to SMUD from the surplus hydroelectric generation (up to 2% of revenues) until the balance in the WRSF reaches a maximum of 4% of budgeted retail revenue. Any deposit amount that exceeds the WRSF maximum of 4% of budgeted retail revenue, may be used for other purposes with the approval of the Board, including returned to customers through an electric bill discount up to 2% of retail revenue. SMUD calculates WRSF transfers based on a forecasted delivery as provided by WAPA. As of January 31, 2024, and based on the current WRSF water year precipitation forecast, SMUD anticipates transferring \$5.7 million into the WRSF in April 2024.

As of December 31, 2023, the balance in the RSF, not including the HRSF, was \$115.8 million, which is approximately 7.2% of annual retail revenue. SMUD transferred approximately \$65.4 million into the HRSF from SMUD's available cash in April 2023 due to above average precipitation, which increased the balance in the HRSF from \$31 million to approximately \$96.4 million. Although the HRSF and the subaccount of the RSF that hedge variations in the volume of energy received from non-SMUD hydroelectric generation currently have positive balances, below average precipitation could deplete the HRSF and RSF balances to zero.

Low Income Discount

As of December 2023, approximately 91,407 customers received the low-income discount offered by SMUD, which represents approximately 16% of all residential customers. As a result of the COVID-19 pandemic, SMUD suspended recertification during the pandemic. In 2023 SMUD restarted the customer recertification. In 2023, the total discount was approximately \$32.7 million. As a result of the effects of the COVID-19 pandemic and related economic downturn, SMUD experienced an increase in low-income discount applicants. See "FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic."

While the low-income discount has provided substantial benefits to low-income customer bills for years, multiple economic variables, such as inflation and rate increases, have had disproportionately negative impacts on low-income customers, particularly those in the 0-50% Federal Poverty Level ("FPL"). In 2023, SMUD established an EAPR Rate Stabilization Fund ("ERSF") to provide an additional discount to the electricity usage charge up to an established maximum discount ("ERSF Additional Discount") for customers in the 0-50% FPL. The ERSF is funded by discretionary non-retail rate revenue, reviewed on an annual basis, and the specific monthly ERSF Additional Discount is set before the year the value is in effect. SMUD expanded its programs and services starting in 2016 to help customers with energy assistance, home improvement packages and education. SMUD is creating tailored solutions to best meet the needs of low-income customers. These solutions include free solar panels and inspecting homes to identify energy saving and fuel switching opportunities. As of December 2023, SMUD has performed 30,000 energy retrofits and, in partnership with Grid Alternatives (a non-profit organization that focuses on implementing solar power and energy efficiency for low-income families), 230 customers have benefited from free solar installations. Forty-eight additional homes received solar and energy efficiency through a partnership with Habitat for Humanity of Greater Sacramento. As part of SMUD's Zero Carbon Plan and the focus on building electrification, SMUD has also been ramping up electrification investments for low-income customers. Since 2019, SMUD has assisted more than 2,600 households with electrification upgrades. Additionally, SMUD has installed nearly 450 electric vehicle chargers and more than 400 electric vehicle circuits in low-income households or areas that serve low-income customers.

Rate Comparisons

SMUD’s rates remain significantly below those of PG&E and other large utilities throughout the State. The following table sets forth the average charges per kWh by customer class for both SMUD and PG&E. PG&E’s rates reflect their recently approved rate increase effective January 1, 2024.

AVERAGE CLASS RATES

	SMUD Rates (cents/kWh)⁽¹⁾	PG&E Rates (cents/kWh)⁽²⁾	Percent SMUD is Below PG&E⁽³⁾
Residential – Standard	18.98¢	44.67¢	57.5%
Residential – Low Income	13.28¢	28.31¢	53.1%
All Residential	18.00¢	37.78¢	52.4%
Small Commercial (Less than 20 kW)	18.33¢	44.17¢	58.5%
Small Commercial (21 to 299 kW)	16.98¢	43.80¢	61.2%
Medium Commercial (300 to 499 kW)	15.94¢	39.95¢	60.1%
Medium Commercial (500 to 999 kW)	14.93¢	34.52¢	56.7%
Large Commercial (Greater than 1,000 kW)	13.30¢	25.06¢	46.9%
Lighting – Traffic Signals	14.45¢	43.60¢	66.9%
Lighting – Street Lighting	15.73¢	56.32¢	72.1%
Agriculture	15.91¢	39.50¢	59.7%
System Average	16.70¢	36.57¢	54.3%

⁽¹⁾ Projected 2024 average prices for SMUD with rates effective January 1, 2024 and May 1, 2024.

⁽²⁾ PG&E average prices in 2024 reflect rates effective January 1, 2024, per Advice Letter 7116-E dated December 29, 2023.

⁽³⁾ The rates in the Average Class Rates table are calculated by dividing the total revenue of each class by the total usage of that class in kWh. The actual savings per customer will vary based on their electricity consumption.

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The following table shows a comparison of SMUD’s charges for the average residential usage of 750 kWh per month (based on an average of summer and non-summer months) and charges of seven similar neighboring or largest utilities in the State.

STATEWIDE COMPARISON–RESIDENTIAL SERVICE

	Monthly Billing Charge 750 kWh⁽¹⁾⁽²⁾	Percent SMUD is (Below)/Above Utility
Sacramento Municipal Utility District	\$134.88	
Pacific Gas & Electric Company	\$345.42	(61.0%)
Roseville Electric Utility	\$122.20	10.4%
Turlock Irrigation District	\$123.67	9.1%
Modesto Irrigation District	\$162.66	(17.1%)
Los Angeles Dept. of Water & Power	\$185.52	(27.3%)
Southern California Edison Company	\$269.57	(50.0%)
San Diego Gas and Electric Company	\$294.74	(54.2%)

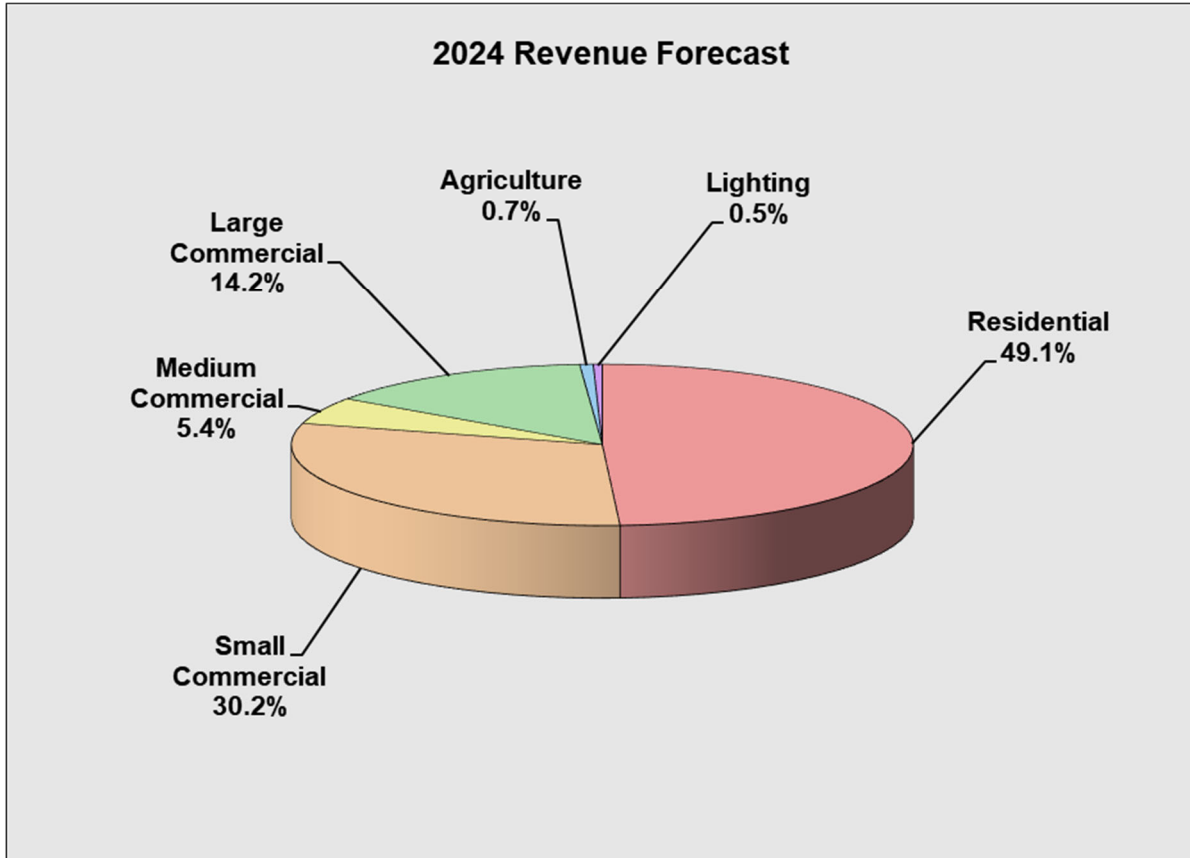
⁽¹⁾ Per individual utility’s published schedules as of January 1, 2024.

⁽²⁾ Average usage of theoretical customer using 750kWh per month.

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Allocation of Revenue by Customer Class

The following chart sets forth the forecast percentage of SMUD revenues from billed sales associated with each customer class.



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Customer Base; Largest Customers

A stabilizing influence on SMUD's revenues is that a substantial proportion is derived from residential customers (49.2% in 2023). Historically, revenue from commercial and industrial consumption has been more sensitive to economic fluctuation. Furthermore, SMUD has no dominant customers that account for a significant percentage of annual revenues. In 2023, no single customer contributed more than 3% of revenues. The top ten customers generated approximately 9% of revenues and the top 30 generated approximately 15% of revenues. The following table presents information on SMUD's top ten customers as of December 31, 2023.

SMUD'S LARGEST CUSTOMERS (As of December 31, 2023)

Customer Type	Annual Revenue (\$ millions)	% of Total Revenue
Government	33.67	2.10%
Government	32.04	2.00%
Government	15.28	0.95%
Technology	13.07	0.82%
Technology	11.05	0.69%
Communications	9.68	0.60%
Industrial Gases	9.28	0.58%
Government	8.27	0.52%
Retail	7.56	0.47%
Communications	7.32	0.46%
Top 10 Total	147.22	9.19%

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POWER SUPPLY AND TRANSMISSION

Power Supply Resources

The following table sets forth information concerning SMUD’s power supply resources as of December 31, 2023. Capacity availability reflects expected capacities at SMUD’s load center, as well as entitlement, firm allocations and contract amounts in the month of July, which is generally SMUD’s peak month.

**POWER SUPPLY RESOURCES
(As of December 31, 2023)**

Source:	Capacity Available (MW)⁽¹⁾
Generating Facilities:	
Upper American River Project – Hydroelectric.....	701
Solano Wind Project – Wind ⁽²⁾	70
Hedge Battery ⁽²⁾	4
Sub-total:	775
Local Gas-Fired Plants:	
Cosumnes Power Plant.....	576
Carson Project.....	103
Procter & Gamble Project.....	166
McClellan.....	72
Campbell Soup Project.....	170
Sub-total:	1,087
Purchased Power:	
Western Area Power Administration (WAPA) ⁽³⁾ ⁽⁴⁾	395
Grady – Wind ⁽²⁾	25
Avangrid (Iberdrola) (PPM) – Wind ⁽²⁾	21
Feed-in-Tariff Photovoltaic – Solar ⁽²⁾	37
Rancho Seco Solar ⁽²⁾	69
NTUA Navajo Drew Solar ⁽²⁾	50
Great Valley – Solar ⁽²⁾	35
Wildflower Solar ⁽²⁾	4
Calpine Geysers – Geothermal.....	100
CalEnergy – Geothermal.....	26
Patua (Gradient/Vulcan) – Geothermal.....	12
Other Long-Term Contracts.....	17
ELCC Portfolio Adjustment ⁽²⁾	120
Sutter Calpine Thermal.....	258
Firm Contract Reserves ⁽⁴⁾	20
Committed Short-Term Purchases ⁽⁵⁾	375
Uncommitted Short-Term Purchases.....	29
Sub-total:	1,590
Total	3,452

(1) Available capacity is the net capacity available to serve SMUD’s system peak load during the month of July.
(2) Capacity values for wind, solar, and storage projects shown are based on resource effective load carrying capability (“ELCC”) modeling.
(3) Total includes SMUD’s Base Resource share and WAPA Customer allocations.
(4) Assumes firm reserves of 5% are included.
(5) Committed Short-Term Purchases are primarily purchased on a year-ahead to season-ahead basis from various sources.

Note: Totals may not add due to rounding.

Power Generation Facilities

Hydroelectric. The UARP consists of three relatively large storage reservoirs (Union Valley, Loon Lake and Ice House) with an aggregate water storage capacity of approximately 400,000 acre-feet and eight small reservoirs. Project facilities also include eight tunnels with a combined length of over 26 miles and eight powerhouses containing 11 turbines. In addition to providing clean hydroelectric power and operating flexibility for SMUD, the UARP area provides habitat for fish and wildlife and a variety of recreational opportunities, including camping, fishing, boating, hiking, horseback riding, mountain biking and cross-country skiing.

The combined capacity of the UARP is approximately 685 MW at SMUD's load center in Sacramento. Under current licensing and mean water conditions, these facilities are expected to generate approximately 1,600 GWh of electric energy annually, which represents approximately 15% of SMUD's current average annual retail energy requirements. In 1957, the Federal Power Commission (predecessor agency to FERC) issued a license to SMUD for the UARP. This 50-year license was subsequently amended to add and upgrade facilities and now includes all segments of SMUD's hydroelectric facilities located on the South Fork of the American River and its tributaries upstream from the Chili Bar Project (described below). On July 23, 2014, FERC issued to SMUD a new 50-year license for the UARP.

On November 9, 2016 FERC issued an Order authorizing SMUD to construct the South Fork Powerhouse downstream of the UARP's Slab Creek Dam. Construction was substantially completed in the fall of 2020, and the new powerhouse was placed into operation on October 25, 2022, adding 1.8 MW of generation to the UARP's overall capacity.

On June 16, 2021, pursuant to Board authorization, SMUD acquired the Chili Bar Hydroelectric Project which consists of a 7 MW powerhouse, reservoir, dam and spillway, north of Placerville on the South Fork of the American River for approximately \$10.4 million (the "Chili Bar Project"). The Chili Bar Project is immediately downstream from the UARP and operates as the regulating reservoir for the UARP's largest powerhouse. Owning the UARP and the Chili Bar Project enables SMUD to operate the two projects with a holistic approach to license compliance and generation efficiency.

Solano 2 Wind Project. SMUD owns and operates an 87 MW wind project, located in Solano County, known as Solano 2. Solano 2 consist of 29 wind turbine generators ("WTGs") rated at 3 MW each. Energy from the project is collected at 21 kV and transmitted over a dedicated 3-mile overhead system to the SMUD-owned Russell substation. At the Russell facility, the energy is transformed to 230 kV and interconnected to PG&E's Birds Landing Switching Station. Energy deliveries are scheduled through the CAISO.

Solano 3 Project. In 2011 and 2012, SMUD constructed a 128 MW wind project adjacent to Solano Phase 2, known as Solano 3. The Solano 3 project consists of 31 WTGs rated at 1.8 MW and 24 WTGs rated at 3.0 MW. The project interconnects through a 34.5 kV underground collection system to the Russell substation. Like the Solano Phase 2 project, this energy is transformed to 230 kV and delivered through the CAISO.

Solano 4 Project. SMUD has developed the Solano 4 Wind Project on land with a wind easement owned by SMUD near the Solano 3 project, known as the Collinsville and Roberts properties, to install 10 WTGs rated at 4.5 MW, and to remove the Solano 1 turbines and replace them with 9 WTGs rated at 4.5 MW. SMUD has met all of the CAISO requirements and has an executed a Large Generator Interconnection Agreement ("LGIA") as of June 2021 that will allow for 90.8 MW of capacity at the point of interconnection. In April 2021, SMUD submitted an application for advisory review by the Solano County Airport Land Use Commission (the "Solano ALUC") of the Solano 4 Wind Project's consistency

with the 2015 Travis Air Force Base Land Use Compatibility Plan (the “Travis Plan”). In May 2021, the Solano ALUC purported to resolve that the Solano 4 Wind Project was inconsistent with the Travis Plan. In August 2021, the Board approved the Project Environmental Impact Report, made findings overriding the Solano ALUC’s finding of inconsistency, made findings there was no alternative to the project, and approved the Solano 4 Wind Project. In September 2021, Solano County filed a writ petition challenging SMUD’s approval of the Solano 4 Wind Project based on procedural environmental, zoning and land use grounds. The parties entered into a settlement agreement on December 14, 2022, and the suit was dismissed on January 10, 2023. The settlement agreement allows for the construction of the Solano 4 Wind Project as planned.

In addition, SMUD applied for and obtained extensions of the Federal Aviation Administration Determinations of No Hazard allowing for construction of the turbines. A contract for the construction of the Solano 4 Wind Project was awarded to Vestas Corporation and the Solano 4 Wind Project is currently under construction. The expected operation date for the Solano 4 Wind Project is May 2024. PG&E identified upgrades needed to interconnect the Solano 4 Wind Project that will not be complete before the expected Solano 4 commercial operation date. PG&E has an approved project and expects to complete the needed upgrades by May of 2025. Realization of the full capacity of the Solano 4 Wind Project may be delayed into the second quarter of 2025 due to the timeframe established for the PG&E required transmission upgrades. SMUD has developed a mitigation plan for the limited interconnection capacity for the first year of operation, in coordination with CAISO and PG&E, of using all of the existing SMUD Solano Russell substation interconnection capacity combined for the dispatch of all the Solano Wind Project. SMUD completed a combined LGIA amendment administrative process, which combines all phases of the Solano Wind Project so it may operate as one project. This was fully executed by SMUD, CAISO, and PG&E on February 27, 2023.

As of the end of 2023, all of the turbine site delivery roads and foundations for the Solano 4 Project have been completed, all of the turbine components have been delivered to the Solano 4 Project site and 10 of the Solano 4 Project turbines have been fully erected.

At the completion of the Solano 4 project, SMUD will have an installed wind capacity of 303 MW in connection with the overall Solano Wind Project, leaving 18 MW at the point of interconnection for future development.

Distributed Solar Photovoltaic. SMUD owns and operates approximately 2 MW of solar photovoltaic generating facilities. These facilities include installations at the Hedge Substation property, SMUD Headquarters, the East Campus Operations Center, and other smaller photovoltaic systems throughout the service area on parking lots.

Hedge Battery. SMUD owns and operates a 4 MW, 8 MWh, battery energy storage system located near the Hedge Substation in South Sacramento. The facility reached commercial operation in January 2023.

ESS Flow Battery. SMUD owns and operates a 0.45 MW, 3 MWh, battery energy storage system located near the Hedge Substation in South Sacramento. The facility reached test operation in September 2023, and commercial operation is planned for March 2024.

Local Gas-Fired Plants. SMUD constructed five local natural gas-fired plants in its service area: the Carson Project, the Procter & Gamble Project, the Campbell Soup Project, McClellan and the Cosumnes Power Plant (each defined below). These five plants are referred to collectively as the “Local Gas-Fired Plants.” These plants are a strategic component of SMUD’s resource mix. In addition to providing SMUD a total capacity of approximately 1,139 MW, the Local Gas-Fired Plants provide SMUD with needed

voltage support, operational and load following capability, and the reliability inherent in having power resources located close to loads. With the exception of McClellan, these plants were financed through the issuance of project revenue bonds by separate joint powers authorities (collectively, the “Authorities”). In late 2021, ownership of all of the Local Gas-Fired Plants was transferred to one of the Authorities, SFA. SMUD has entered into long-term agreements with SFA providing for the purchase by SMUD of all of the power from each of the Local Gas-Fired Plants on a take-or-pay basis. This consolidation created operational and administrative efficiencies without changing any of the functionality of the power plants. Although the Local Gas-Fired Plants are owned by SFA, SMUD has exclusive control of their dispatch and manages their operations as part of its overall power supply strategy.

Payments under the power purchase agreements are payable from the revenues of SMUD’s Electric System prior to the payment of the principal of or interest on SMUD’s Senior Bonds and Subordinated Bonds (each as defined under the caption “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS” below), as are other maintenance and operation costs and energy payments. For further discussion of SMUD’s obligations to make these payments to SFA, see “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Joint Powers Authorities.*”

The following is a brief description of the five Local Gas-Fired Plants:

The Cosumnes Power Plant (the “Cosumnes Power Plant”). The Cosumnes Power Plant is a 612 MW natural gas-fired, combined cycle plant located in the southern portion of Sacramento County adjacent to SMUD’s decommissioned Rancho Seco Nuclear Power Plant. Commercial operation of the Cosumnes Power Plant commenced on February 24, 2006. SFA increased the net generating capacity of the facility by 81 MWs via an Advanced Gas Path (“AGP”) upgrade. The additional AGP generation was realized after hardware and software upgrades were completed on both units in March of 2019. The Cosumnes Power Plant is owned by SFA, a joint powers authority formed by SMUD and MID. The existing take-or-pay power purchase agreement between SMUD and SFA expires no earlier than when the related bonds have been paid in full (the outstanding related bonds are scheduled to mature on July 1, 2030). On June 5, 2022, the Cosumnes Power Plant was shut down due to a ground fault in the STG stator. The repair was completed in February 2023 and the plant returned to service on March 5, 2023. See “FACTORS AFFECTING THE REGION – Cosumnes Power Plant Outage”.

The Carson Cogeneration Project (the “Carson Project”). The Carson Project, a 103 MW natural-gas-fired cogeneration project consisting of separate combined cycle and peaking plants, provides steam to the Sacramento Regional County Sanitation District (“SRCSD”) wastewater treatment plant adjacent to the site. The Carson Project was originally owned by the Central Valley Financing Authority (“CVFA”), a joint powers authority formed by SMUD and the SRCSD. Construction of the Carson Project was completed and the plant began commercial operation on October 11, 1995. The CVFA bonds issued to finance the Carson Project were defeased in September 2019. In late 2021, ownership of the Carson Project was transferred to SFA. The take-or-pay power purchase agreement between SMUD and SFA relating to the Carson Project will be in effect until terminated by SMUD.

The Procter & Gamble Cogeneration Project (the “Procter & Gamble Project”). The Procter & Gamble Project, a 182 MW natural gas-fired cogeneration facility, is located in an established industrial area of Sacramento. The initial combined cycle portion of the plant began commercial operation on March 1, 1997. Construction of the peaking plant portion of the Procter & Gamble Project commenced during 2000 and the unit achieved commercial status on April 24, 2001. The Procter & Gamble Project produces steam for use in Procter & Gamble Manufacturing Company’s oleochemical manufacturing processes and electricity for sale to SMUD. The Procter & Gamble Project was originally owned by the Sacramento Cogeneration Authority (“SCA”), a joint powers authority formed by SMUD and SFA, a separate joint powers authority. The SCA bonds issued to finance the Procter & Gamble Project were defeased in

September 2019. In late 2021, ownership of the Procter & Gamble Project was transferred to SFA. The take-or-pay power purchase agreement between SMUD and SFA relating to the Procter & Gamble Project will be in effect until terminated by SMUD.

The Campbell Soup Cogeneration Project (the “Campbell Soup Project”). The Campbell Soup Project, a 170 MW natural gas-fired cogeneration project, was completed and began commercial operations on December 4, 1997. Upgrades were implemented during 2000, which increased the plant’s peaking capacity to 180 MW, well above its net demonstrated capacity of 159.8 MW. The plant is located in south Sacramento adjacent to the Capital Commerce Center (formerly the Campbell Soup Company food processing facility). The Campbell Soup Project was originally owned by the Sacramento Power Authority (“SPA”), a joint powers authority formed by SMUD and SFA. The SPA bonds issued to finance the Campbell Soup Project were redeemed in July 2015. In late 2021, ownership of the Campbell Soup Project was transferred to SFA. The take-or-pay power purchase agreement between SMUD and SFA relating to the Campbell Soup Project (the “Campbell Soup/McClellan PPA”) covers both the Campbell Soup Project and McClellan and will be in effect until terminated by SMUD. In support of the Zero Carbon Plan, SMUD is exploring replacing the Campbell Soup Project in 2026, contingent upon SMUD having sufficient other resources available and grid reliability can be maintained. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – 2030 Zero Carbon Plan.”

The McClellan Gas Turbine (“McClellan”). McClellan is a 72 MW natural gas-fired simple cycle combustion turbine generating plant at McClellan Business Park in Sacramento. This turbine is connected to SMUD’s electric system and is operated to meet SMUD’s peak-load requirements. McClellan is aligned for remote starting and operation with both black start and fast start capabilities. SMUD constructed the McClellan unit in 1986 as a 50 MW emergency power source for the McClellan Air Force Base. In 2001, following the Air Force Base closure, McClellan was upgraded to 72 MW and converted for SMUD’s use. In May 2007, SMUD transferred ownership of McClellan to SPA for more efficient operation. SPA did not issue debt related to McClellan. In late 2021, ownership of McClellan was transferred to SFA. SFA passes all costs of operations and maintenance through to SMUD in accordance with the terms of the Campbell Soup/McClellan PPA. In exchange for paying all costs related to McClellan, SMUD receives all of the power generated thereby on a take-or-pay basis. In support of the Zero Carbon Plan, SMUD is exploring replacing McClellan in 2026, contingent upon SMUD having sufficient other resources available and grid reliability can be maintained. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – 2030 Zero Carbon Plan.”

Fuel Supply

General. SMUD is obligated to arrange for the purchase and delivery of natural gas to the Local Gas-Fired Plants. Management of the natural gas procurement and delivery process is a key focus of SMUD’s reliability and risk policies. Although the natural gas consumption of the power plants for SMUD’s load can vary significantly depending on the season, precipitation, and the market price of power and natural gas, the plants are forecasted to need, on average in 2024, a total of approximately 91,000 Decatherms per day (“Dth/day”) with a daily peak slightly more than 171,000 Dth/day of natural gas. SMUD has implemented a comprehensive strategy to secure a reliable and diversified fuel supply through a variety of agreements for the supply, transportation, and storage of natural gas.

Supply. SMUD hedges a significant portion of its expected gas needs to meet customer power requirements. This includes gas for the Local Gas-Fired Plants and for the Sutter Energy Center. See “Power Purchase Agreements – *Sutter Energy Center*”. This is accomplished through a combination of long-term supply arrangements and an exposure reduction program. The program consists of a primary rolling three-year exposure reduction component, a fuel hedging component on a rolling three-year basis, as well as supplemental fixed calendar year components reaching out up to five calendar years. Long-term

arrangements may consist of a combination of physical commodity supply contracts, financial hedges, or options. Natural gas is purchased from a wide variety of producers and marketers at the northern and southern California borders, and from the San Juan and the Rocky Mountain supply basins. SMUD has a number of both fixed-price supply agreements and financial hedging contracts to fix gas costs ranging from one month to several years in duration. Including fixed price biogas contracts as of February 29, 2024, these contracts are forecasted to have hedged the price exposure on approximately 100%, 82% and 81% of SMUD's anticipated natural gas requirements for 2024, 2025 and 2026, respectively. While the financial effects resulting from the unhedged portions of SMUD's natural gas requirements are difficult to predict, SMUD's financial results could be materially impacted.

SMUD has contracted with NCGA to purchase an approximate average of 8,700 Dth/day over the remaining life of a contract expiring May 31, 2027 (the "NCGA Contract"). Under the NCGA contract, SMUD pays a discounted variable price for the fuel and anticipates periodically fixing the effective price under separate hedging contracts. Until November 1, 2023 the delivery point for the NCGA Contract was the AECO hub in Alberta. Starting November 1, 2023, to increase delivery efficiencies, SMUD has exchanged the gas delivered at the AECO hub under the NCGA Contract with gas delivered at the Malin substation at the California-Oregon border. From there SMUD is using its long-term transport capacity to deliver the fuel to the local area plants.

SMUD has also contracted with NCEA to purchase an approximately 22,000 Dth/day on average, or to be converted to the approximate cash flow value in Megawatt-hours ("MWh") of electricity over the remaining life of a contract expiring on May 31, 2049. The gas will be delivered to the SMUD system via the Malin receipt point on the PG&E backbone system. SMUD is using its long-term transport capacity to deliver the fuel to the local area plants. SMUD will pay a discounted variable price for the fuel and anticipates periodically fixing the effective price under separate hedging contracts. [As described in the forepart of this Official Statement, SMUD expects to amend and restate the contract with NCEA in connection with the issuance of the Bonds (as defined in the forepart of this Official Statement).] [adjust for 2024 Senior Bonds offering documents]

Renewable Natural Gas Supply. As a component of meeting SMUD's RPS goals, SMUD procures renewable natural gas and digester gas as fuels to generate renewable electricity from the Cosumnes Power Plant. Descriptions of the renewable natural gas supply agreements are provided below.

In March 2009, SMUD entered into a 15-year contract (that qualifies as renewable energy) with Shell Energy North America (US), L.P. ("Shell Energy") to purchase up to 6,000 Dth/day of renewable natural gas produced from a landfill project in Texas. SMUD began taking deliveries of this supply in April 2009. In March 2012, SMUD amended the contract with Shell Energy to increase the maximum volumes to 7,300 Dth/day and extended the term by 10 years to March 31, 2034. Currently, the delivery point is PG&E Topock and SMUD is using its long-term transport capacity to deliver it to the Cosumnes Power Plant. In 2016, SMUD entered into a 3-year contract with Shell Energy to sell back the entire volume of renewable natural gas purchased, less 500 Dth/day, to be sold into the vehicle transportation markets. Upon expiration of the initial 3-year contract for the sale of biogas to Shell Energy, SMUD extended the sell back of the entire volume of biogas twice for an additional three years with Element Markets (now Anew RNG, LLC), starting in 2020 and 2023. While SMUD sells the renewable natural gas, it does not count the renewable natural gas towards its RPS obligations.

SMUD contracted with Heartland Renewable Energy, LLC ("HRE") in December 2009 for a 20-year supply of up to 7,000 Dth/day of renewable natural gas from a digester facility in Colorado. Deliveries began in March of 2014. Currently, the delivery point is Opal, Wyoming and SMUD uses its long-term transport capacity to deliver it to the Cosumnes Power Plant. HRE has not delivered volumes from the project to SMUD since December 2016 due to litigation with Weld County, Colorado regarding odor and

permit issues. EDF Renewables, the majority owner of HRE, notified SMUD in August of 2017 that it is in discussions with a short list of bidders to sell its interests in the facility. In June of 2020, the project was purchased and SMUD's contract was assigned to the new owner, Platte River Biogas, LLC ("PRB"). SMUD and PRB reached a settlement in the third quarter of 2021 that could lead to terminating the contract.

In September 2011, SMUD and CVFA entered into a "Digester Gas Purchase and Sale Agreement" through which the Carson Project cleans nearly all of the digester gas received from Sacramento Regional County Sanitation District ("SRCSD") and sells it to SMUD for delivery to the Cosumnes Power Plant. In return, SMUD pays all of the Carson Project's costs in acquiring, cleaning and making the gas available to SMUD. The Digester Gas Purchase and Sale Agreement expires in September 2025. In late 2021, the Digester Gas Purchase and Sale Agreement, along with the Carson Project was transferred to SFA. The Carson Project is currently receiving, processing and selling up to 1,500 Dth/day with provisions for volume increases over time to 2,500 Dth/day. Digester gas, when designated for use in SMUD's power plants, is counted as renewable generation towards SMUD's RPS obligations.

In December 2011, SMUD entered into a 20-year agreement with EIF KC Landfill Gas LLC ("EIF") to purchase up to 7,050 Dth/day of renewable natural gas produced from multiple landfill projects. SMUD began taking deliveries of this supply in January 2014. Currently the delivery point is Kern River – Opal and SMUD uses its long-term transport capacity to deliver it to the Cosumnes Power Plant. Renewable natural gas, when designated for use in SMUD's power plants, is counted as renewable generation towards SMUD's RPS obligations. In April 2022, SMUD entered into a transaction to sell the renewable natural gas purchased into the vehicle transportation markets. The transaction expires in March 2025. While SMUD sells the renewable natural gas, it does not count the renewable natural gas towards its RPS obligations.

AB 2196 is a law that defines the criteria by which existing and future renewable natural gas contracts will qualify for the State RPS program. The CEC adopted a RPS Eligibility Guidebook on April 30, 2013, which includes detailed rules for implementation of AB 2196. SMUD received an updated certificate of eligibility from the CEC in July 2014 for the Cosumnes Power Plant that included the quantities of renewable natural gas from all four contracts. The CEC adopted a revised RPS Eligibility Guidebook (Ninth Edition) on April 27, 2017. This latest guidebook did not change the RPS eligibility of any of the above SMUD renewable natural gas and digester gas contracts, but did simplify reporting requirements for these contracts.

Gas Transmission

SMUD has satisfied its obligation to deliver natural gas to its power plants by constructing a natural gas pipeline, purchasing an equity interest in two PG&E backbone gas transmission lines, and contracting for capacity on a number of existing interstate natural gas transmission lines.

The Local Pipeline. SMUD constructed and owns a 20-inch, 50-mile natural gas pipeline in the greater Sacramento area (the "Local Pipeline") that transports gas to all of the Local Gas-Fired Plants except McClellan. The Local Pipeline is interconnected with PG&E's major State gas transmission lines 300 and 401. Additionally, it may be interconnected with one or more private gas gathering pipelines located in the area, a gas storage project and/or other FERC approved pipelines that may be built in the local area. In conjunction with the construction of the Cosumnes Power Plant, SMUD extended the Local Pipeline to the plant site. The 26-mile extension was completed in 2004. The extension is 24 inches in diameter and was designed to serve both the Cosumnes Power Plant and an additional second phase, if constructed.

PG&E Backbone Gas Transmission Lines 300 and 401. In 1996, SMUD purchased an equity interest in PG&E's backbone gas transmission lines 300 and 401 (referred to as the PG&E backbone). The total capacity acquired at that time was approximately 85,000 Dth/day and consisted of approximately 43,600 Dth/day of firm gas transport from the California–Oregon border at Malin, Oregon and 44,700 Dth/day from the California–Arizona border at Topock, Arizona, to SMUD's interconnection with the PG&E backbone near Winters, California. SMUD was also entitled to a share of non-firm capacity, which was approximately 4,360 Dth/day; making the total capacity potentially available to SMUD almost 90,000 Dth/day. This purchase made SMUD a co-owner of the PG&E backbone gas transmission lines 300 and 401 and obligated SMUD to pay PG&E to operate the pipelines on its behalf subject to the terms of the purchase agreement and operating protocols. PG&E reduced operating pressures on Line 300 after PG&E suffered a natural gas explosion in San Bruno, CA in September of 2010. Operating pressures and capacity may also fluctuate due to regulatory and other changes. As of December 1, 2021, SMUD holds a total capacity of approximately 87,000 Dth/day, consisting of approximately 47,572 Dth/day of firm gas transport from the California–Oregon border at Malin, and 39,193 Dth/day of firm gas transport from the California–Arizona border at Topock, Arizona, to SMUD's interconnection with the PG&E backbone near Winters, California.

Kern River Gas Transmission Company Long Term Agreement. SMUD has an agreement with Kern River Gas Transmission Company for 20,000 Dth/day of firm capacity through April 30, 2028. This capacity gives SMUD access to the Rocky Mountain supply basin at Opal, Wyoming, and connects to PG&E Line 300 (owned in part by SMUD) at Daggett, California.

SMUD's diversified portfolio of gas transmission arrangements allow for the purchase of gas from a variety of suppliers and locations, and the opportunity to capitalize on regional price differentials where possible. In addition, its ownership interest in the SMUD/PG&E backbone and Local Pipeline enhances the reliability of SMUD's gas supply.

Gas Storage

SMUD also employs gas storage as part of its overall fuel supply strategy. Gas storage is useful in helping to balance gas supply, mitigate market price volatility, and provide a reliable supply to meet peak day delivery requirements.

SMUD has a contract with Lodi Gas Storage, LLC, which began in April 2023 and expires in March 2026, for capacity in the Lodi Gas Storage project located near Acampo in northern California. The contract provides SMUD with capacity levels of 1.0 million Dth of storage inventory, 10,000 Dth/day of injection rights and 20,000 Dth/day of withdrawal capacity.

SMUD also has a second contract with Lodi Gas Storage, LLC, which began in April 2022 and expires in March 2024, for additional capacity in the Lodi Gas Storage project located near Acampo in northern California. The contract provides SMUD with capacity levels of 1.0 million Dth of storage inventory, 10,000 Dth/day of injection rights and 20,000 Dth/day of withdrawal capacity. SMUD does not plan to renew this contract upon expiration.

SMUD has a contract with Wild Goose Storage LLC, that will begin in April 2024 (but which allows for early injection (December 2023 – March 2024)) for capacity in the Wild Goose Storage project located near Gridley in northern California. The contract provides SMUD with capacity levels of 2.0 million Dth of storage inventory, ratcheted (12,500-14,000 Dth/day) volumes of injection rights and ratcheted (10,000 – 24,000 Dth/day) volumes of withdrawal capacity.

Power Purchase Agreements

SMUD has a number of power purchase agreements to help meet its power requirements. Some of these agreements are described below.

Western Area Power Administration. Effective January 1, 2005, SMUD entered into a 20-year contract with WAPA. SMUD has entered into a replacement agreement extending the term by 30 years for the period of January 1, 2025 through December 31, 2054. Power sold under this contract is generated by the Central Valley Project (“CVP”), a series of federal hydroelectric facilities in northern California operated by the United States Bureau of Reclamation. The contract provides WAPA’s CVP Base Resource customers (including SMUD) delivery of a percentage share of project generation in return for reimbursement of an equivalent share of project costs. SMUD’s CVP Base Resource share is roughly 25% of project generation and costs. This is expected to be approximately 318 MW of capacity and 661 GWh of energy in an average water year but will vary depending on precipitation. Energy available under the contract is determined by water releases required for water supply and flood control and is then shaped into higher value periods within other CVP operating constraints. More capacity and energy are typically available in spring and summer months and less in fall and winter.

SMUD also has a contract with WAPA expiring December 31, 2024, by which WAPA delivers an additional 200-300 MW per hour from projects located in the Pacific Northwest based on certain contractual parameters. In 2022, SMUD received 1,913 GWh of energy under this contract. SMUD has entered into a replacement agreement for the period January 1, 2025 through December 31, 2030.

Avangrid (formerly Iberdrola Renewables (“Iberdrola”)). SMUD has a contract with Iberdrola that provides SMUD with bundled renewable energy (energy plus RECs). The contract agreement is for 126 GWh of wind power generated in Solano County, California. The SMUD Board approved an extension of the wind contract through June 30, 2025.

Patua Project LLC. In April 2010, SMUD entered into a power purchase agreement with Patua Project LLC (“Patua”), a subsidiary of Gradient Resources, for the delivery of up to 132 MW (expected to be 120 MW nominal power output) of renewable energy from geothermal generation being developed in north central Nevada, from a Gradient Resources project known as the Patua Project. The Patua Project was to have been developed in three phases. Since 2010, the agreed upon capacity has been reduced several times. In December 2013, Phase 1 of the project, which had been reduced to 30 MW, finally achieved commercial operation. In 2014, the parties concluded negotiations on the fourth amendment to the power purchase agreement with Patua, which reduced the total capacity down to 40 MW, extended the commercial operation date of Phase 2 to January 1, 2016, and allowed Patua to add up to 13 MW of solar photovoltaics to supplement geothermal production. In addition, this amendment shifted responsibility to Patua for a portion of the long-term transmission service agreements that have been underutilized due to the project not meeting its targets. In November 2015, the Patua Project was acquired by TL Power, LLC, a wholly owned subsidiary of Cyrq Energy, Inc. (“Cyrq”). In December 2015, Cyrq terminated Phase 2. Upon termination of Phase 2, the contractual right for Cyrq to add solar photovoltaics to supplement geothermal production was reduced to 10 MW. As a result of poor performance during the first year of operation, SMUD reduced its obligation to take power from 30 MW to 25 MW. Performance continued to lag in 2015 and 2016 and SMUD further reduced its obligation to take power from 25 MW to 19 MW.

Renewable Energy Feed-In Tariff. In September 2009, SMUD’s Board authorized a feed-in tariff program for the purchase of renewable energy from local renewable energy projects connected to SMUD’s distribution system. SMUD’s Board authorized connection of up to 100 MW under the feed-in tariff which included standard payment rates and standard purchase terms for power. The feed-in tariff program became effective on January 1, 2010. Under the feed-in tariff, SMUD has executed 20-year term power purchase

agreements for solar projects totaling 98.5 MW. Construction and start-up were completed on all projects between 2010 and 2012.

CalEnergy LLC. In August 2014, SMUD entered into a 22-year power purchase agreement with CalEnergy LLC for the purchase of 30 MW per year of renewable energy from its Salton Sea geothermal facilities. As of July 1, 2017, SMUD began receiving up to 10 MW from the CalEnergy portfolio, which escalated to the full 30 MWs on May 1, 2020.

Rancho Seco Solar. In October 2015, SMUD entered into a 20-year power purchase agreement with Rancho Seco Solar LLC for the purchase of energy from a 10.88 MW solar PV project sited on SMUD's property at the closed Rancho Seco Nuclear Generating Station. Commercial operation was achieved in August of 2016. Rancho Seco Solar LLC leased the property from SMUD under a land lease agreement. The output of this project directly serves two large commercial customers that executed agreements with SMUD for retail supply of solar power.

In May 2019, SMUD entered into a 30-year power purchase agreement for an additional 160 MW solar PV project with Rancho Seco Solar II, LLC. The project is located on SMUD-owned property at the closed Rancho Seco Nuclear Generating Station, adjacent to the existing 10.88 MW solar PV project. Construction began in 2019, and the project became commercially operable in February 2021.

Grady Wind Energy. In October 2015, SMUD entered into a 25-year power purchase agreement with Grady Wind Energy LLC ("Grady") for the purchase of energy from a 200 MW wind project located in New Mexico (the "Grady Project"). The Grady Project began commercial operations on August 5, 2019. Energy from the Grady Project is delivered to CAISO. SMUD purchases 100% of the Grady Project output which includes energy, renewable energy credits, and capacity attributes.

Great Valley Solar 2, LLC. In January 2017, SMUD entered into a 20-year power purchase agreement with Great Valley Solar 2, LLC for the purchase of energy from a 60 MW solar PV project located in Fresno County, California. The project's commercial operation date was December 28, 2017.

ARP-Loyalton Cogen LLC. On September 14, 2016, Senate Bill 859 ("SB 859") was signed into law. Under SB 859, a POU must procure its proportionate share of 125 MW of renewable energy from biomass plants burning high hazard forest fuels, subject to terms of at least five years. Seven POU's (SMUD, MID, Turlock Irrigation District ("TID"), Anaheim Public Utilities, Imperial Irrigation District, Los Angeles Department of Water & Power and Riverside Public Utilities, collectively described herein as the "ARP-Loyalton POU's") jointly solicited proposals for up to 29 MW of contract capacity for renewable energy to meet the requirements of SB 859. In January 2018, SMUD entered into a five-year power purchase agreement with ARP-Loyalton Cogen LLC to fulfill 18 MW of the required 29 MW with SMUD's share being just over 23 percent (the "ARP-Loyalton PPA"). See "*Roseburg Forest Product Co.*" below for a discussion of the remaining SB 859 capacity. The contract became effective on April 1, 2018. On February 18, 2020, ARP-Loyalton Cogen LLC filed for Chapter 11 bankruptcy and stopped producing and selling energy from the biomass plant. On May 7, 2020, the bankruptcy court approved the sale of the Loyalton facility to Sierra Valley Enterprises, LLC ("SVE"). SVE initially expressed interest in bringing the facility back into service; however, the bankruptcy trustee requested repeated extension of the deadline for SVE to accept or reject the ARP-Loyalton PPA. The latest deadline was April 19, 2023, the date of expiration of the ARP-Loyalton PPA term. As SVE did not resume operations before the end of the ARP-Loyalton PPA term, the ARP-Loyalton POU's have negotiated a settlement agreement with the bankruptcy trustee (the "ARP-Loyalton Settlement Agreement"). The ARP-Loyalton Settlement Agreement, which SMUD executed and is filed with the court, defines funds from the performance security that the ARP-Loyalton POU's will keep to cover legal and administrative fees, along with a contingency amount to cover potential risk of future damages. Since the ARP-Loyalton POU's entered into a five-year agreement to

procure compliant biomass and provided SVE the opportunity to accept the ARP-Loyalton PPA and restart operations, the ARP-Loyalton POUs consider their statutory obligations to have been fulfilled.

Roseburg Forest Products Co. For the remaining SB 859 biomass obligation of 11 MW, SMUD and the other ARP-Loyalton POUs have entered into a five-year power purchase agreement with Roseburg Forest Products Co. SMUD's share of the contract capacity is 2.5795 MW, and the plant began operating under the contract on February 26, 2021.

Sutter Energy Center. SMUD entered into an initial two-year contract (with a third-year exercisable option) with Calpine Energy Services, L.P. ("Calpine") for the ability to schedule up to 258 MW of energy from Sutter Energy Center. The Sutter Energy Center is a natural gas-fired, combined-cycle facility located in Yuba City, California. The initial contract became effective on April 1, 2018. SMUD exercised its option to extend the contract, which expired November 1, 2020. SMUD entered into a new contract with Calpine for the same 258 MW of energy that became effective January 1, 2021, and had an original expiration date of January 1, 2024. In December 2021, SMUD extended this contract through December 31, 2026.

Drew Solar, LLC. In June 2018, SMUD entered into a 30-year power purchase agreement with Drew Solar, LLC for the purchase of energy from a 100 MW solar PV project located in Imperial County, California. The project's scheduled commercial operation date was set to be December 31, 2021. The commercial operation date was delayed due to Force Majeure claims surrounding the COVID pandemic and supply chain constraints caused by changes in Federal regulatory requirements. The project began commercially operating on November 3, 2022.

Wildflower Solar. In October 2018, SMUD entered into a 25-year power purchase agreement with Wildflower Solar I, LLC, for the purchase of energy, capacity, and RECs from a 13 MW solar PV project located in Rio Linda, California. The project began commercially operating on December 18, 2020.

Coyote Creek (Formerly Sacramento Valley Energy Center, LLC.) In August 2021, SMUD entered into a 30-year power purchase agreement with Sacramento Valley Energy Center, LLC for the purchase of energy from a 200 MW solar PV and 100 MW four-hour Battery Energy Storage System ("BESS") capacity project located in Sacramento County, California. The project's commercial operation date was originally expected to be December 31, 2023, but has been delayed to 2026 due to ongoing development and permitting delays.

SloughHouse Solar, LLC. In September 2021, SMUD entered into a 30-year power purchase agreement with SloughHouse Solar, LLC for the purchase of energy from a 50 MW solar PV project located in Sacramento County, California. The project's commercial operation date was originally expected to be December 31, 2023, but the commercial operation date has been delayed to March 31, 2025 due to ongoing development and permitting delays.

Country Acres Solar. In November 2023, SMUD entered into a 30-year power purchase agreement with Country Acres Clean Power LLC for the purchase of energy from a 344 MW solar PV project, with a 20-year term for 172 MW four-hour BESS capacity, located in Placer County, California. The project's commercial operation date is expected to be December 15, 2026.

Geysers Power Company, LLC. In March 2021, SMUD executed a 10-year power purchase agreement with Geysers Power Company, LLC for 100 MW of energy and capacity from the Geysers geothermal energy plant located in Lake and Sonoma Counties, California. SMUD started to receive deliveries on January 1, 2023.

Transmission Service Agreements

TANC California-Oregon Transmission Project. The 340-mile COTP is one part of a three 500-kV line coordinated system known as the California-Oregon Intertie (“COI”). The COTP is allocated one-third of the 4,800 MW capability of the COI system (see related agreements below). TANC is entitled to use 1,390 MW and is obligated to pay approximately 80% of the operating costs of the COTP. SMUD is a member of TANC and a party to Project Agreement No. 3 (“PA3”), under which it is entitled to 378 MW and obligated to pay on an unconditional take-or-pay basis about 27.5% of TANC’s COTP debt service and operations costs, subject to a “step-up” obligation of up to 25% of its entitlement share upon the unremedied default of another TANC member-participant. In 2009, SMUD entered into a long-term layoff agreement with certain members that increased SMUD’s entitlement by 35 MW. In 2014, SMUD entered into another long-term layoff agreement with certain other members that increased SMUD’s COTP entitlements by 128 MW and amended the 2009 layoff agreement that returned 13 MW to a member. In January 2024, SMUD entered into an agreement to extend the 2009 long-term layoff agreement with certain members to January 31, 2034. As of January 31, 2024, SMUD was entitled to approximately 528 MW of TANC’s transfer capability for imports and 405 MW for exports, and is obligated to pay approximately 38.6% of TANC’s COTP debt service and operations costs. SMUD’s payments under this contract, like SMUD’s payments under its other power purchase and transmission service agreements, are treated as “Maintenance and Operation Costs” or “Energy Payments” under the resolutions securing the Senior Bonds and Subordinated Bonds (each as defined under the caption “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS” below). SMUD relies on its COTP rights to purchase power, access contingency reserves through the Western Power Pool, and obtain renewable resources to supplement its own resources to serve its load. TANC maintains its own property/casualty insurance program. TANC’s budget for COTP costs, support services and advocacy expenses is about \$45.4 million for 2023. SMUD’s obligation of the TANC budget is about \$17.4 million for 2023.

TANC Tesla-Midway Transmission Service. TANC has a long-term contract with PG&E to provide TANC with 300 MW of transmission service between PG&E’s Midway Substation and the electric systems of the TANC Members (the “Tesla-Midway Service”). SMUD’s share of the Tesla-Midway Service had been 46 MW. As part of the 2009 long-term layoff agreement, SMUD acquired an additional 2 MW of South-of Tesla Principles (“SOTP”) transmission rights for 15 years starting February, 2009 from another TANC member, bringing SMUD’s share of the Tesla-Midway Service to 48 MW.

Bonneville Power Administration. In 2009, SMUD entered into a transmission service agreement with the Bonneville Power Administration (“BPA”) for 60 MW of firm point-to-point transmission service from BPA’s Hilltop substation in northeastern California to the Malin substation at the California-Oregon border for the purpose of transmitting power under SMUD’s power purchase agreement with Gradient Resources for Phase 1 of the Patua geothermal project over BPA’s 230kV transmission lines. In early 2013, in accordance with BPA’s transmission tariff, the transmission service was split into two 30 MW services and deferred as appropriate to better fit the timing of expected commercial operation of Phase 1 and Phase 2 of the Patua Project. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – Patua Project LLC.” SMUD submitted another request for the 30 MW of transmission procured for Phase 2 of the Patua Project to split the service into a 10 MW and a 20 MW service, with the 10 MW of service deferred and timed with the originally expected commercial operation date of Phase 2 of the Patua Project. With the termination of Phase 2 of the Patua Project and SMUD’s reduced obligation due to the poor performance of Phase 1 of the Patua Project, much of the transmission reserved for it will no longer be needed. BPA does not have a provision in its transmission tariff for early termination of transmission service. However, the power purchase agreement with Patua requires Patua to cover unused transmission that SMUD has procured for the Patua purchases. On January 1, 2020, SMUD’s transmission rights with BPA were reduced to 19 MW. This now aligns with SMUD’s PacifiCorp transmission rights of 19 MW described in the immediately following paragraph.

Pacificorp. In 2009, SMUD entered into a transmission service agreement with PacifiCorp for 60 MW of firm point-to-point transmission service across PacifiCorp’s high voltage step-up transformer at the Malin substation at the California-Oregon border for the purpose of transmitting power under SMUD’s power purchase agreement with Gradient Resources for Phase 1 of the Patua Project. In early 2013, in accordance with PacifiCorp’s transmission tariff, the commencement of the 60 MW of transmission service was deferred to fit the timing of first deliveries expected from the 30 MW of Phase 1 of the Patua Project. In 2013, SMUD terminated the 60 MW of transmission service and requested two new transmission services of 30 MW each, with service start dates timed to better fit with the expected start dates of Phase 1 and Phase 2 of the Patua Project. With the reduction in expected output of the Patua Project, SMUD terminated the second 30 MW transmission agreement, and replaced it with a 10 MW transmission service agreement for Phase 2 of the Patua Project. With the termination of Phase 2 of the Patua Project, SMUD terminated the 10 MW Pacificorp transmission service agreement and as a result of the reduced obligation to take power from the Patua Project, SMUD has reduced its remaining Pacificorp transmission service from 30 MW to 19 MW.

Western Area Power Administration. SMUD does not have a direct interconnection of its power system to the COTP. To receive power deliveries that use its COTP rights, SMUD has a long-term transmission service agreement with WAPA for transmission of 342 MW of power from the COTP line (received at WAPA’s Tracy or Olinda substations) to SMUD’s system. In May of 2011, WAPA completed the Sacramento Voltage Support Transmission Project. Completion of this project has given SMUD an additional 165 MW of transmission service rights on WAPA’s system from the COTP at the Olinda Substation to SMUD’s system at the Elverta Substation.

Projected Resources

The following tables titled “Projected Requirements and Resources to Meet Load Requirements Energy Requirements and Resources” (the “Energy Table”) and “Capacity Requirements and Resources Net Capacity – Megawatts” (the “Capacity Table”) describe SMUD’s contracted commitments and owned resources available to meet its forecasted load requirements through the year 2033. Resources are shown on an annualized basis with market purchases netted against surplus sales to arrive at a single net position for each year. Because SMUD’s available resources do not exactly match its actual load requirements on an hourly basis, there are times during a year when resources available will either exceed or be insufficient to meet SMUD’s needs. Expected actual capacity values are included in the tables. These values may differ from measured net demonstrated capacity values of the Local Area Gas-Fired Plants. The table below also includes the impact energy efficiency has on resource requirements as discussed below under “Demand Side Management Programs.” See “BUSINESS STRATEGY” and “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Local Gas-Fired Plants.*”

Resources listed in both the Energy Table and the Capacity Table are listed as either renewable or non-renewable. Generally, SMUD follows the CEC guidelines for eligibility requirements. Some of SMUD’s renewable resources listed include solar, wind, geothermal, small hydroelectric facilities with a capacity of 30 MW or less, and biomass (representing generation from a fuel comprised of agricultural wastes and residues, landscape and tree trimmings, wood and wood waste).

As in any forecast, assumptions are made. In both the Energy Table and the Capacity Table the WAPA and UARP forecasts assume average water conditions throughout the period. On the capacity table, WAPA and Cosumnes Power Plant renewable capacity is estimated based on the ratio of renewable energy to total WAPA or Cosumnes Power Plant energy. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Hydroelectric.*”

The Uncommitted Purchases (Sales) on the tables represent either anticipated future needs or surpluses. Future needs are met well in advance of delivery. They also include both renewable and non-renewable resources.

The Transmission Losses represent reductions in the amount of energy or capacity from the location it was purchased to the point of entering SMUD's electrical system. This amount reduces the Total Resources available to meet the Total Projected Energy Requirements of the electrical system.

Demand Side Management Programs

SMUD's demand-side management initiatives represent an integral element of its total resource portfolio, and are organized into two major components: energy efficiency and load management programs. Energy efficiency offerings include a wide variety of programs and services to customers to retrofit or upgrade existing equipment and fixtures and to install new energy efficiency measures in existing and new construction facilities. Load management allows SMUD to reduce the load on the electric system by cycling residential air conditioning, and calling upon commercial/industrial customers to curtail energy usage when energy is constrained during the summer or system emergencies. Load management programs are projected to allow SMUD to shed approximately 60 MW of peak load in an emergency on a hot day, representing about 2% of SMUD's maximum system peak demand.

The customer "smart meter" system with 2-way communication capability provides information regarding customer usage patterns, which is expected to help SMUD tailor rate designs that provide customers with both the information and ability to manage their energy usage around high energy cost periods.

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**PROJECTED REQUIREMENTS AND RESOURCES TO MEET
LOAD REQUIREMENTS⁽¹⁾
ENERGY REQUIREMENTS AND RESOURCES (GWh)**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Renewable Resources										
<u>District or Joint Powers Authority Owned:</u>										
UARP - Small Hydro ⁽²⁾	95	92	94	94	94	94	94	94	94	94
Solano Wind	776	898	902	836	837	836	836	836	837	836
Cosumnes-Shell Landfill Gas and Digester Gas ⁽³⁾	61	505	582	692	692	692	692	692	692	692
Total	932	1,495	1,578	1,622	1,623	1,622	1,622	1,622	1,623	1,622
<u>Purchases</u>										
Western (WAPA) – Small Hydro ⁽²⁾	27	15	15	15	15	15	15	15	15	15
Grady – Wind	900	897	897	897	900	897	897	897	900	897
Avangrid (Iberdrola) (PPM) - Wind	73	34	0	0	0	0	0	0	0	0
Patua (Gradient/Vulcan) – Geothermal	113	146	147	147	147	147	147	141	147	147
Geysers – Geothermal	878	876	876	876	878	876	876	876	878	0
Cal Energy – Geothermal	224	223	223	223	224	223	223	223	224	223
Great Valley SolarShares	170	171	169	169	169	169	166	166	167	163
Rancho Seco PV2	332	330	328	327	325	323	322	320	319	317
Rancho Seco PV	22	22	22	22	22	22	22	22	22	22
Feed-in-Tariff Photovoltaic – Solar	209	208	207	206	205	204	203	202	60	0
Navajo Drew (NTUA) Solar	301	298	291	289	288	286	285	284	282	281
Sloughhouse (Kings Country)	0	22	125	124	124	123	122	122	121	121
Wildflower Solar	31	31	33	33	33	33	33	33	33	33
CoyoteCreek (SVEC) Solar	0	0	507	505	502	500	497	495	492	490
Country Acres	0	0	710	706	703	699	696	692	689	689
Other Long-Term Contracts	149	139	29	8	8	6	6	6	6	4
Future Uncommitted Renewables	0	0	0	600	1,989	3,351	4,206	4,537	5,870	5,870
Total	3,430	3,411	4,580	5,147	6,534	7,875	8,717	9,030	10,225	9,271
Non-Renewable										
<u>District or Joint Powers Authority Owned:</u>										
UARP – Large Hydro ⁽²⁾	1,536	1,578	1,610	1,618	1,625	1,635	1,625	1,617	1,626	1,635
Cosumnes Power Plant	4,219	3,756	3,685	2,511	1,792	675	675	530	528	525
Procter & Gamble Project	855	794	235	123	43	2	3	5	4	4
Carson Project	391	450	7	3	0	1	3	4	4	2
Campbell Soup Project	1,018	838	0	0	0	0	0	0	0	0
McClellan	36	0	0	0	0	0	0	0	0	0
Total	8,055	7,415	5,538	4,256	3,460	2,313	2,306	2,157	2,163	2,166
<u>Purchases</u>										
Western (WAPA) – Large Hydro ⁽²⁾	785	485	485	485	485	485	485	485	485	485
Western (WAPA) Customers (Wheeling) ⁽²⁾	46	29	29	29	29	29	29	29	29	29
Calpine Sutter	1,556	1,713	1,585	0	0	0	0	0	0	0
Committed Purchases	444	0	0	0	0	0	0	0	0	0
Total	2,831	2,227	2,099	514	514	514	514	514	514	514
Total Resources	15,247	14,548	13,795	11,538	12,131	12,324	13,159	13,323	14,526	13,573
Uncommitted Purchases / (Sales)	(4,420)	(3,613)	(2,775)	(399)	(780)	(906)	(1,672)	(1,780)	(2,866)	(1,867)
Transmission Losses (COTP/CVP)	(3)	(4)	(48)	(82)	(102)	(129)	(146)	(152)	(179)	(179)
Total Projected Energy Requirements	10,825	10,932	10,973	11,058	11,250	11,289	11,340	11,391	11,481	11,527
Energy Efficiency (EE)	26	50	74	98	122	141	160	180	197	224
Customer PV	67	98	133	164	196	228	259	288	317	344
Expected Electric Vehicle (EV) Charging	(88)	(167)	(265)	(382)	(514)	(661)	(821)	(980)	(1,157)	(1,357)
Electric Building (EB)	(13)	(32)	(54)	(80)	(113)	(156)	(209)	(272)	(343)	(417)
Battery Storage (Utility)	(0)	(1)	(118)	(121)	(142)	(188)	(225)	(232)	(266)	(266)
Battery Storage (BTM)	(0)	(1)	(1)	(2)	(3)	(5)	(6)	(8)	(10)	(11)
Total Gross Energy Requirements before EE, PV and EV Charging	10,816	10,880	10,741	10,734	10,795	10,648	10,498	10,367	10,219	10,044

(1) Totals may not sum due to rounding. Excludes a potential carbon sequestration power purchase agreement that SMUD is considering.

(2) 2024 based on current precipitation levels as of December 31, 2023. All other years assume average precipitation.

(3) Includes a biomethane contract counted as renewable (see “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Renewable Natural Gas Supply*”).

CAPACITY REQUIREMENTS AND RESOURCES⁽¹⁾
NET CAPACITY – MEGAWATTS

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Load:										
Planned Peak	2,981	2,991	2,990	3,017	3,024	3,029	3,032	3,056	3,088	3,104
Transmission Losses	28	28	28	28	28	28	28	28	28	28
Dispatchable Demand Resource	(71)	(71)	(165)	(165)	(183)	(202)	(165)	(165)	(165)	(165)
Adjusted Peak	2,938	2,949	2,853	2,880	2,869	2,855	2,895	2,919	2,951	2,967
Reserve Margin	514	516	499	504	502	500	507	511	516	519
Adjusted Peak with Reserves	3,452	3,465	3,352	3,384	3,371	3,355	3,402	3,430	3,467	3,486
Renewable Resources										
District or Joint Powers Authority Owned:										
UARP – Small Hydro	45	45	45	45	45	45	45	45	45	45
Solano Wind	70	129	128	139	133	134	113	108	115	109
Cosumnes – Shell Landfill Gas and Digester Gas ⁽²⁾	8	68	120	120	120	120	120	120	120	120
Total	123	242	293	304	298	299	278	273	279	273
Purchases										
Western (WAPA) – Small Hydro	11	9	9	9	9	9	9	9	9	9
Grady – Wind	25	20	75	68	58	74	72	72	66	67
Avangrid (Iberdrola) (PPM) - Wind	21	--	--	--	--	--	--	--	--	--
Patua (Gradient/Vulcan) – Geothermal	12	12	12	12	12	12	12	12	12	12
CalEnergy– Geothermal	26	26	26	26	26	26	26	26	26	26
Geysers – Geothermal	100	100	100	100	100	100	100	100	100	100
Great Value Solar Shares	35	33	12	11	13	11	9	6	7	5
Rancho Seco – PV1	2	2	1	1	1	0	0	0	0	0
Rancho Seco – PV2	66	61	22	19	17	14	14	10	10	8
Feed-in-Tariff Photovoltaic - Solar	37	31	10	8	7	6	6	4	4	--
Wildflower Solar	4	4	1	1	1	1	1	1	1	0
Navajo Solar	50	46	16	12	12	9	8	5	6	4
Sloughhouse Solar	--	--	18	15	14	13	13	10	10	8
CoyoteCreek Solar with Storage	--	--	159	149	142	142	132	130	127	122
CountryAcre with Storage	--	--	257	245	236	232	222	220	216	211
Stand-alone Storage	4	5	80	601	601	717	757	844	983	1,088
Future Uncommitted Renewables (Solar, Wind, Other)	--	--	--	51	146	148	184	189	184	193
Future Uncommitted Firm Renewables (Geothermal)	--	--	--	--	150	150	200	200	200	200
Other Long-Term Contracts	17	16	2	2	2	2	2	2	2	1
Total	410	364	797	1,330	1,545	1,655	1,767	1,841	1,960	1,954
Non-Renewable										
District or Joint Powers Authority Owned:										
UARP – Large Hydro	656	656	656	656	656	656	656	656	656	656
Cosumnes Power Plant	568	508	492	492	492	492	492	492	492	492
Carson Project	103	103	103	103	100	100	100	100	100	100
Procter & Gamble Project	166	166	166	166	166	--	--	150	150	150
McClellan	72	72	72	--	--	--	--	--	--	--
Campbell Soup Project	170	170	170	--	--	--	--	--	--	--
Total	1,735	1,675	1,659	1,417	1,414	1,248	1,248	1,398	1,398	1,398
Purchases										
Western (WAPA) – Large Hydro	363	304	304	304	304	304	304	304	304	304
Western (WAPA) Customers (wheeling)	21	18	18	18	18	18	18	18	18	18
Sutter Energy Center	258	258	258	--	--	--	--	--	--	--
Firm Contract Reserves ⁽³⁾	20	17	17	17	17	17	17	17	17	17
Committed Purchases	375	--	--	--	--	--	--	--	--	--
Total	1,037	596	596	338	338	338	338	338	338	338
Total Variable Renewal Diversity Benefit/(Risk)	120	91	178	219	262	318	353	452	481	482
Uncommitted Purchases / (Sales)	34	503	(165)	(478)	(482)	(508)	(577)	(867)	(984)	(960)
Total Resources	3,458	3,470	3,357	3,131	3,376	3,360	3,407	3,435	3,472	3,486

- (1) Based on information available as of December 31, 2023. Totals may not sum due to rounding. Capacity values for wind, solar, storage, and future variable renewable projects shown are based on resource ELCC modeling. Excludes a potential carbon sequestration power purchase agreement that SMUD is considering.
- (2) The Cosumnes Power Plant is a 612 MW plant that includes capacity attributable to a biogas contract counted as renewable (see “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Renewable Natural Gas Supply*”).
- (3) SMUD assumes that for all firm system purchases, the suppliers will be planning 5% reserves.

Balancing Authority Area Agreements

Background. SMUD began operating as an independent control area, later termed a Balancing Authority, on June 18, 2002 within the WECC reliability organization's region. This reduced SMUD's exposure to the costs and reliability risks of the CAISO's markets. SMUD expanded its operational footprint beyond SMUD's service territory to include WAPA's electric system, including the MID, Roseville, and Redding service areas (on January 1, 2005) and the COTP (on December 1, 2005). As described further below, SMUD ceased to be the Balancing Authority on April 30, 2011, as BANC took SMUD's place as the Balancing Authority. SMUD remains the operator of the Balancing Authority through a contract with BANC. SMUD administers the contracts with WAPA and TANC to provide specified Balancing Authority-related and other services, and is compensated by WAPA and TANC. TANC recovers such Balancing Authority services costs as a part of its annual operating budget from the COTP Participants and WAPA recovers its Balancing Authority services costs through its rates for power and transmission service. The agreement with WAPA, among other terms, establishes operating procedures and reserve obligations between the parties and terminates on December 31, 2024. BANC, SMUD and WAPA will develop successor agreements in 2024 to take effect upon expiration of the existing contract. WAPA in turn has agreements with electric systems connected to it to assure that such systems also operate reliably (i.e., MID, Roseville and Redding). As a result of the transition to BANC as the Balancing Authority, SMUD assigned or terminated its interconnection and operations agreements with other interconnecting Balancing Authority areas (i.e., CAISO, BPA and TID). BANC is now the party to these agreements as they primarily address only Balancing Authority matters required for compliance with the reliability standards issued by the North American Electric Reliability Corporation ("NERC"), such as emergency assistance arrangements. See also "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY – Western Energy Imbalance Market."

Reliability Standards. The Energy Policy Act of 2005 gave FERC authority to enforce reliability standards for the bulk electric system. In June 2007, these standards became mandatory for SMUD and BANC.

In 2022, SMUD and BANC underwent a combined NERC/WECC audit to evaluate compliance with applicable reliability standards. These audits occur every three years. At the conclusion of the audit, regulators determined that neither entity had any compliance violations related to the Operations and Planning or Critical Infrastructure Protection Standards. SMUD and BANC will undergo another NERC/WECC audit sometime in 2025.

Balancing Authority of Northern California. SMUD, MID, Redding and Roseville executed a Joint Exercise of Powers Agreement (the "BANC JPA Agreement") creating BANC on May 8, 2009. BANC became operational on May 1, 2011 as a Balancing Authority and replaced SMUD as the entity responsible for Balancing Authority-related reliability standards. Since that time, the Trinity Public Utilities District and the City of Shasta Lake have also become members of BANC. As provided in the BANC member agreement, liability for penalties associated with such Balancing Authority-related reliability standards are shared on a *pro rata* basis among the members of BANC. SMUD is the Balancing Authority operator under contract and performs Balancing Authority operational functions on behalf of BANC, much as it did when it was the Balancing Authority. The BANC JPA Agreement assigns cost responsibility based on member load within the BANC Balancing Authority, with SMUD representing approximately 70% of the total load.

Power Pool and Other Agreements

Western Power Pool Agreement. The Western Power Pool ("WPP") is an agreement among over 30 utilities and public agencies in the western United States to coordinate contingency reserve sharing,

referred to as the WPP Reserve Sharing Program (“RSP”). The RSP permits participants to rely on one another in the event that any participant experiences a generating resource outage. While SMUD became an RSP participant in 2009, participation is limited to Balancing Authorities, which SMUD relinquished to BANC in 2011. Under the RSP, BANC and TID (also a WPP member) share their reserve amounts and when necessary and when sufficient unused COTP rights and capacity are available, may call upon WPP reserves from the RSP member systems in the Pacific Northwest. The WPP RSP permits members to operate more efficiently by reducing the contingency reserves that they would otherwise need to have available if they could not rely on each other.

TANC-SMUD OASIS Administration Agreement. SMUD entered into an agreement with TANC to provide OASIS services (transmission sales and scheduling related services in the BANC BA of TANC members’ COTP rights) on September 29, 2005. SMUD is compensated for performing these services. TANC and SMUD entered into a letter agreement dated October 25, 2010 to clarify each party’s role for regulatory reliability standards compliance responsibilities and take into account SMUD’s increased efforts related to supporting TANC’s compliance requirements. SMUD and TANC entered into an agreement to transition this service to the Western Area Power Administration, effective on May 1, 2023. Going forward SMUD will only have a minor role in receiving payments and distributing revenues to the TANC members.

Other Interconnection Agreements

Background. SMUD’s electric system was originally purchased from PG&E in 1947. SMUD’s service area is mostly surrounded by PG&E’s and WAPA’s service areas. The SMUD and PG&E electric systems are interconnected at SMUD’s Rancho Seco and Lake 230-kV substations. SMUD and WAPA are interconnected at SMUD’s Hurley, Elverta, Natomas and Folsom 230-kV substations.

PG&E Interconnection Agreement. PG&E and SMUD executed a Replacement Interconnection Agreement (“RIA”) which became effective on January 1, 2010. The RIA provides that SMUD and PG&E operate their interconnections reliably, plan their electric systems to meet their load requirements, and avoid or mitigate impacts they cause by certain electric system modifications. The agreement has a termination date of December 31, 2024, subject to FERC approval. SMUD and other northern California utilities have similar interconnection agreements with PG&E, albeit with different expiration dates. PG&E filed a successor interconnection agreement with one of these utilities, TID, on November 1, 2023, to become effective on January 1, 2024. Many interconnection customers, including SMUD, intervened and submitted comments or protests in the FERC docket. FERC accepted the filing and TID and PG&E are now in a settlement process, pending litigation if the parties cannot resolve the disputed items. SMUD anticipates that PG&E will seek to negotiate a successor interconnection agreement with SMUD which will be informed by the TID settlement or litigation process. While some functional mechanisms in the interconnection agreement may change, SMUD expects that its successor interconnection agreement will substantially preserve the balance of burdens and benefits consistent with FERC’s standard of requiring rates and terms of service that are just and reasonable. SMUD expects this process to be completed by the current expiration date of the RIA.

PG&E Generator Interconnection Agreements. SMUD signed a LGIA with CAISO and PG&E for the Solano 3 Wind Project, effective December 16, 2008, with a 50-year term. The Solano 2 Wind Project has interconnection rights granted through a LGIA, also with the CAISO and PG&E. The agreement became effective in January 2010 and has a term of 20 years. On June 3, 2021, SMUD entered into a LGIA with the CAISO and PG&E, for the planned 90.8 MW Solano 4 Wind project with a 10-year term and automatic renewal for successive one-year terms thereafter. On February 27, 2023, SMUD completed a combined LGIA amendment administrative process which combines the Solano 2, 3 & 4 projects into one Solano Wind Project. The original agreement conditions for the individual projects are carried forward with

a new combined project maximum production limit of 320.8 MW at the point of interconnection at the Russell Substation.

Other PG&E generator interconnection agreements include a Small Generator Interconnection Agreement with PG&E for Slab Creek with a 22-year term which became effective on January 14, 2010, and a Small Generator Interconnection Agreement with PG&E for the Chili Bar Project with a 10-year term which became effective on June 2, 2021.

WAPA Interconnection Agreement and other WAPA Agreements. SMUD and WAPA executed an interconnection agreement on May 8, 2008 for a term of 40 years which establishes the terms and conditions under which the SMUD and WAPA transmission systems are interconnected and memorializes related understandings. SMUD is working with WAPA on a reconfiguration at the shared Elverta interconnection to increase reliability and accommodate new generation interconnection in the area. SMUD has other agreements with WAPA including for operation of the Sutter Energy Center generating facility, communication systems terms and fiber optic access, training and for use of WAPA labor and heavy equipment to assist SMUD's maintenance activities on an as-available basis.

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SELECTED OPERATING DATA

Selected operating data of SMUD for the four years ended December 31, 2020 through 2023 are presented in the following table.

SMUD SELECTED OPERATING DATA CUSTOMERS, SALES, SOURCES OF ENERGY AND REVENUES

	Year Ended December 31,			
	2023	2022	2021	2020
Customers at End of Period:				
Residential	588,308	576,471	572,786	568,741
Commercial and industrial	70,147	69,512	69,426	68,628
Other	7,253	7,290	7,345	7,354
Total	665,708	653,273	649,557	644,723
MWh Sales:				
Residential	4,676,766	4,763,277	4,749,079	4,906,566
Commercial and industrial	5,374,936	5,805,052	5,649,474	5,453,120
Other	52,660	53,965	54,473	55,590
Total	10,104,362	10,622,294	10,453,026	10,415,276
Surplus power/out of area sales	4,143,139	2,493,651	2,774,907	2,259,991
Total	14,247,501	13,115,945	13,227,933	12,675,267
Sources of Energy Sold MWh:				
Generated by SMUD	7,270,858	4,368,126	6,776,244	6,414,380
Purchased or exchanged	7,308,120	9,162,576	6,884,003	6,691,279
Total	14,578,978	13,530,702	13,660,247	13,105,659
Less System losses and SMUD usage	331,477	414,757	432,314	430,392
Total	14,247,501	13,115,945	13,227,933	12,675,267
Gross System peak demand (kW) ⁽¹⁾	3,059,000	3,263,000	3,019,000	3,057,000
Average kWh sales per residential customer ⁽²⁾	8,018	8,293	8,316	8,650
Average Revenue per kWh Sold:				
Residential ⁽²⁾ (cents)	16.87	16.73	16.20	15.27
Commercial & industrial ⁽²⁾ (cents)	15.00	13.97	13.95	13.17

⁽¹⁾ Peak system MW values are measured at the four SMUD interconnection points and exclude SMUD's generation losses. Historical values include the impacts of dispatchable, non-dispatchable, and energy efficiency program capacity savings.

⁽²⁾ The average kWh sales per residential customer and the average revenue per kWh sold are calculated based upon billed and unbilled sales.

Source: SMUD

SELECTED FINANCIAL DATA

SMUD Financial Information

The following table presents selected financial data of SMUD. Under generally accepted accounting principles, data with respect to SMUD's component units, such as the Authorities, is included with that of SMUD. The following presents data for SMUD only and not its component units, such as the Authorities. SMUD's audited financial statements for the years ended December 31, 2023 and December 31, 2022 [are included in APPENDIX B attached to this Official Statement]. The following unaudited data for SMUD (excluding its component units) is drawn from SMUD's financial records that have been subjected to the auditing procedures applied in the audits of SMUD's and its component units financial statements for the years ended December 31, 2020 through 2023.

SMUD FINANCIAL DATA⁽¹⁾
(thousands of dollars)

Year Ended December 31,

	2023	2022 (Restated)	2021 (Restated)	2020
Summary of Income				
Operating Revenues ⁽²⁾	\$ 1,918,854	\$ 2,138,655	\$ 1,784,290	\$1,582,979
Operating Expenses	(1,772,503)	(2,102,451)	(1,464,069)	(1,397,845)
Operating Income	146,351	36,204	320,221	185,134
Interest and Other Income	145,035	124,480	108,788	63,014
Interest Expense	(73,275)	(74,702)	(81,692)	(80,699)
Change in Net Position	\$ 218,111	\$ 85,982	\$ 347,317	\$ 167,449
Selected Statement of Net Position Information				
Net Plant in Service	\$ 3,652,422	\$ 3,682,180	\$ 3,502,335	\$3,234,208
Construction Work in Progress	587,722	323,499	365,478	460,155
Electric Utility Plant – Net	<u>\$ 4,240,144</u>	<u>\$ 4,005,679</u>	<u>\$ 3,867,813</u>	<u>\$3,694,363</u>
Unrestricted Cash	\$ 534,157	\$ 591,410	\$ 569,001	\$ 662,155
Rate Stabilization Fund	\$ 212,131	\$ 156,016	\$ 188,992	\$ 168,726
Total Assets	\$ 6,610,818	\$ 6,447,908	\$ 6,096,865	\$5,826,449
Net Position	\$ 2,596,004	\$ 2,377,893	\$ 2,291,910	\$1,944,593
Long-Term Debt ⁽³⁾	\$ 2,305,156	\$ 2,236,824	\$ 2,387,686	\$2,523,921
Debt Service Coverage Ratios				
Parity Debt Service Coverage Ratio...	2.58x	1.86x	2.59x	2.25x
Parity and Subordinate Debt Service Coverage Ratio	2.44x	1.78x	2.47x	2.14x

(1) The financial statements of SMUD comprise financial information of SMUD along with its component units, CVFA, SPA, SCA, SFA, NCGA and NCEA. This table includes only financial information of SMUD excluding its component units. Net operating revenues and expenses and Electric Utility Plant and Capitalization of CVFA, SPA, SCA, SFA, NCGA and NCEA are not included in this table, although amounts paid to or received from the Authorities by SMUD are included.

(2) Operating Revenues reflect net transfers to (from) the Rate Stabilization Fund for each full year as follows:
 2023 \$56.1 million
 2022 (\$33.0) million
 2021 \$20.3 million
 2020 \$25.1 million

Transfers to the Rate Stabilization Fund reduce operating revenues in the year transferred; transfers from the Rate Stabilization Fund increase operating revenues. Transfers from the HGA balancing account in the Rate Stabilization Fund are automatic based on the amount of precipitation received. See "RATES AND CUSTOMER BASE – Rates and Charges" above.

(3) Long-Term Debt includes Long-Term Debt due within one year and unamortized premiums.

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Financial Information of SMUD and the Authorities

The following table presents a summary of selected financial information for SMUD and the Authorities.

SUMMARY OF FINANCIAL INFORMATION OF SMUD AND THE AUTHORITIES FOR THE YEARS ENDED DECEMBER 31, 2023 AND 2022 (RESTATED) (thousands of dollars)

	Year Ended December 31, 2023			Year Ended December 31, 2022 (Restated)		
	SMUD	Authorities	Total ⁽¹⁾	SMUD	Authorities	Total ⁽¹⁾
Summary of Income						
Operating Revenues ⁽²⁾	\$ 1,918,854	\$ 314,464	\$ 1,930,664	\$ 2,138,655	\$ 166,674	\$ 2,147,334
Operating Expenses	(1,772,503)	(278,519)	(1,748,368)	(2,102,451)	(120,798)	(2,065,254)
Operating Income	146,351	35,945	182,296	36,204	45,876	82,080
Interest and Other Income	145,035	17,944	136,217	124,480	1,871	89,820
Interest Expense.....	(73,275)	(25,516)	(98,791)	(74,702)	(26,482)	(101,184)
Change in Net Position.....	\$ 218,111	\$ 28,373	\$ 219,722	\$ 85,982	\$ 21,265	\$ 70,716
Selected Statement of Net Position Information						
Net Plant in Service	\$3,652,422	\$ 288,235	\$3,653,965	\$3,682,180	\$ 285,346	\$3,680,736
Construction Work in Progress.....	587,722	2,937	590,659	323,499	24,259	347,758
Electric Utility Plant – Net	\$4,240,144	\$ 291,172	\$4,244,624	\$4,005,679	\$ 309,605	\$4,028,494
Unrestricted Cash	\$ 534,157	\$ 36,458	\$ 570,615	\$ 591,410	\$ 36,454	\$ 627,864
Rate Stabilization Fund	\$ 212,131	--	\$ 212,131	\$ 156,016	--	\$ 156,016
Total Assets	\$6,610,818	\$1,105,825	\$7,320,723	\$6,447,908	\$1,133,460	\$7,217,304
Net Position.....	\$2,596,004	\$ 273,616	\$2,586,699	\$2,377,897	\$ 271,836	\$2,366,977
Long-Term Debt ⁽³⁾	\$2,305,156	\$ 753,465	\$3,058,621	\$2,236,824	\$ 787,215	\$3,024,039

⁽¹⁾ Financial information for SMUD and the SMUD JPAs (CVFA, SPA, SCA, SFA, NCGA and NCEA) include intercompany balances. The financial information reflects balances after the elimination of intercompany accounts including Authorities distributions to SMUD of \$26.8 million in 2023 and \$36.5 million in 2022.

⁽²⁾ Operating Revenues reflect net transfers to (from) the Rate Stabilization Fund as follows:
2023 \$56.1 million
2022 (\$33.0) million

Transfers to the Rate Stabilization Fund reduce operating revenues in the year transferred; transfers from the Rate Stabilization Fund increase operating revenues. Transfers from the HGA balancing account in the Rate Stabilization Fund are automatic based on the amount of precipitation received. See “RATES AND CUSTOMER BASE – Rates and Charges” above.

⁽³⁾ Long-Term Debt includes Long-Term Debt due within one year and unamortized premiums.

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Management's Discussion of SMUD's Operating Results

Year Ended December 31, 2023. For the year ended December 31, 2023, SMUD reported an increase in net position of \$218.1 million as compared to an increase of \$70.7 million for 2022.

Operating revenues were \$228.5 million lower than 2022. This was primarily due to lower sales of surplus gas (\$118.3 million), transfers to the RSF (\$67.2 million), sales to customers (\$28.3 million), transfers from the RSF (\$21.9 million), and LCFS revenue (\$3.9 million), partially offset by higher sales of surplus power (\$13.6 million), AB 32 revenue (\$3.7 million), customer fees (\$1.1 million), and lower transmission revenue (\$2.3 million).

Operating expenses were \$292.8 million lower than 2022. This was primarily due to lower purchased power expenses (\$175.5 million), production operating expenses (\$146.4 million), depreciation expenses (\$22.7 million), production maintenance expenses (\$12.3 million), transmission and distribution operating expenses (\$7.2 million), partially offset by higher administrative and general expenses (\$33.4 million), transmission and distribution maintenance expenses (\$15.8 million), public good expenses (\$8.8 million), and customer service and information expenses (\$6.6 million).

Non-Operating income increased by \$55.2 million primarily due to fair market value assessment and gain on sale of land (\$33.3 million), higher interest income (\$21.7 million), higher unrealized holding gains (\$11.4 million), higher CCA revenue (\$5.7 million), partially offset by lower investment income (\$39.1 million).

Interest expense decreased \$27.9 million from 2022.

Year Ended December 31, 2022. For the year ended December 31, 2022, SMUD reported an increase in net position of \$70.7 million as compared to an increase of \$347.3 million for 2021.

Operating revenues were \$363.0 million higher than 2021. This was primarily due to higher sales to customers (\$130.7 million), sales of surplus gas (\$96.0 million), sales of surplus power (\$62.2 million), transfers to the RSF (\$28.9 million), transfers from the RSF (\$24.3 million), customer fees (\$9.5 million), AB 32 revenue (\$4.9 million) and LCFS revenue (\$2.2 million), partially offset by lower gain on sale of carbon allowance futures (\$3.7 million).

Operating expenses were \$601.2 million higher than 2021. This was primarily due to higher purchased power expenses (\$263.6 million), amortization of pension and OPEB (\$126.9 million), production operating expenses (\$125.1 million), depreciation expense (\$49.5 million), transmission and distribution maintenance expenses (\$22.1 million), production maintenance expenses (\$18.4 million), transmission and distribution operating expenses (\$8.1 million), public good expenses (\$7.4 million), and customer service and information expenses (\$4.5 million), partially offset by lower administrative and general expenses (\$27.4 million).

Non-Operating income decreased by \$19.0 million primarily due to lower grant revenue (\$39.6 million), unrealized holding losses (\$3.7 million), partially offset by higher investment income (\$19.7 million), closeout of escrow account (\$2.8 million), and loss on asset retirements (\$1.9 million).

Interest expense increased \$19.5 million from 2021.

Regulatory Assets. In accordance with Governmental Accounting Standards Board ("GASB") No. 62, "Regulated Operations," SMUD defers, as regulatory assets, certain types of expenditures. These assets are amortized and collected through future rates.

As of December 31, 2023, SMUD had a total of \$916.1 million recorded for regulatory assets. Regulatory assets associated with costs related to implementation of GASB No. 68 which requires SMUD to record a net pension liability was \$323.5 million and deferred outflows related to GASB No. 68 was \$174.6 million at December 31, 2023. Regulatory assets associated with costs related to implementation of GASB No. 75 which requires SMUD to record a net Other Post Employment Benefit (OPEB) liability was \$268.2 million and deferred outflows related to GASB No. 75 was \$39.6 million at December 31, 2023. Regulatory assets associated with Rancho Seco decommissioning costs totaled \$108.0 million at December 31, 2023. Nuclear fuel storage costs and non-radiological decommissioning costs have been collected in rates since 2009. For a complete description of these regulatory assets, see Note 8 (Regulatory Deferrals) to SMUD's financial statements.

The Board has authorized the deferral of any charges or credits that result from the change in valuation of ineffective hedges that should be reported as Investment Revenue/Expense on the Statements of Revenues, Expenses and changes in net position. The Board's resolution establishes that such charges or credits are not included in rates based on market value changes but are included in rates when the underlying transactions occur. Therefore, under GASB No. 62, "Regulated Operations," any such changes are included in the Statement of Net Position as regulatory assets or liabilities. For a complete description of these derivative financial instruments, see Note 9 (Derivative Financial Instruments) to SMUD's financial statements.

RANCHO SECO DECOMMISSIONING

Overview. The 913 MW Rancho Seco Nuclear Power Plant ("Rancho Seco") began Nuclear Regulatory Commission ("NRC") licensed operations in 1974. In June 1989, the electorate of SMUD voted against allowing SMUD to continue to operate Rancho Seco as a nuclear generating facility, and the plant was shut down. In 1991, SMUD submitted a report (the "Financial Assurance Plan") providing required financial assurance to the NRC that SMUD will have sufficient funds available to pay for the cost of decommissioning. On March 17, 1992, the NRC granted SMUD a change from an operating to a possession-only license for Rancho Seco that relieved SMUD from compliance with a number of NRC regulations applicable to operating nuclear power plants. SMUD also filed a proposed decommissioning plan with the NRC (the "Decommissioning Plan"), which was approved in March 1995.

After the decommissioning efforts began, no suitable disposal option was available to SMUD for the Class B and Class C low level radioactive waste generated during the plant decommissioning. With the used nuclear fuel stored onsite requiring oversight staff, SMUD opted to store the Class B and Class C radioactive waste in an existing interim onsite storage building until a suitable disposal option was available. In November 2007, the possession-only license for Rancho Seco was amended to update the Decommissioning Plan to terminate the possession-only license for the Class B and Class C waste in two phases. Phase I of the decommissioning was completed at the end of 2008. Following verification of the site conditions, SMUD submitted a request to the NRC to reduce the licensed facility from 2,480 acres to the interim onsite storage building and about one acre surrounding it. The request was approved by the NRC in September 2009. Phase II of decommissioning included the approximately two-acre interim storage building containing the Class B and Class C radioactive waste and surrounding area. In September 2013, SMUD entered into a contract with the operator of the low-level radioactive waste disposal facility located in Andrews, Texas. Shipment of the Class B and Class C radioactive waste for disposal was completed in November 2014. SMUD conducted additional clean-up activities and radiological surveys, which were followed by NRC confirmatory surveys. The results of these surveys demonstrated unit dose criteria well below NRC release criteria, and the NRC approved the Phase II area for unrestricted use. On September 21, 2017, SMUD formally requested the termination of the possession-only license. On August

31, 2018, the NRC officially terminated SMUD’s possession-only license for the remaining Class B and Class C waste at Rancho Seco.

As part of the Decommissioning Plan, the nuclear fuel and Greater Than Class C (“GTCC”) radioactive waste is being stored in a dry storage facility (the Independent Spent Fuel Storage Installation or “ISFSI”) constructed by SMUD, adjacent to the former reactor facility. The NRC has separately licensed this facility. The DOE, under the Nuclear Waste Policy Act of 1982, is responsible for permanent disposal of used nuclear fuel and GTCC radioactive waste. SMUD has a contract with the DOE for the removal and disposal of this waste. The DOE was to have a waste repository operating by 1998, but has experienced significant and ongoing delays. The Nuclear Waste Policy Act designates Yucca Mountain in Nevada as the final and exclusive repository for the nation’s used nuclear fuel. The DOE discontinued the Yucca Mountain license review activities in 2010, but after a court ordered the NRC to resume its review in 2013, the NRC published its final safety evaluation report in 2015. The final safety report, and the final environmental impact statement, concluded that the proposed repository would be safe and environmentally sound for one million years.

Nevertheless, seeking alternatives to Yucca Mountain, the Blue-Ribbon Commission on America’s Nuclear Future delivered its final report in January 2012 with several recommendations. The DOE responded to the recommendations by issuing a report in January 2013 (Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste). Key to both documents is a focus on used fuel from decommissioned sites including Rancho Seco. The DOE report accepts most of the Blue-Ribbon Commission recommendations, and contains timelines for fuel management options which proposed removing the fuel from Rancho Seco as early as 2021. However, any progress on the strategies proposed by the DOE is dependent on legislative action by Congress. With no legislative action taken to date, the 2021 projected date for fuel removal slips year-for-year. Therefore, SMUD cannot determine at this time when the DOE will fulfill its contractual obligations to remove the nuclear fuel and GTCC waste from the Rancho Seco facility. In the meantime, SMUD continues to incur costs of approximately \$6 to \$7 million per year for storage of used nuclear fuel at the ISFSI. SMUD has filed a series of successful lawsuits against the federal government for recovery of past spent fuel costs. SMUD last recovered over \$14 million in 2023. SMUD plans to continue pursuing cost recovery claims to ensure it is reimbursed for all such costs in the future. The ISFSI will be decommissioned, and its license terminated after the fuel and GTCC is removed.

Financial Assurance Plan. In accordance with the Financial Assurance Plan, SMUD established and funded an external decommissioning trust fund currently held by Computershare Corporate Trust (the “Decommissioning Trust Fund”). Pursuant to the Financial Assurance Plan, SMUD made the final deposit into the Decommissioning Trust Fund in 2008. Additional deposits are not expected but will be made if increased cost estimates or reduced fund interest earnings require it. In 2011, the NRC began requiring that SMUD demonstrate financial assurance for decommissioning the ISFSI as well as the former power facility, increasing the overall cost for decommissioning Rancho Seco. The estimated total cost for decommissioning the ISFSI was approximately \$7.1 million on December 31, 2023. The decommissioning cost estimate is required to be updated every three years. As of December 31, 2023, the balance of the Decommissioning Trust Fund was \$9.4 million, excluding unrealized gains and losses. Based on the current decommissioning cost estimate and the value of the fund, SMUD’s existing Decommissioning Trust Fund provides sufficient funds to complete decommissioning and terminate the ISFSI license.

In addition to these costs, SMUD also estimates that it would cost approximately \$13.1 million to restore the site to make it available for other SMUD uses with some major structures remaining intact. Site restoration is not a legal requirement. No site restoration is currently underway.

EMPLOYEE RELATIONS

SMUD has approximately 2,334 employees, most of whom are covered by a civil service system. SMUD is a contracting member of the California Public Employees' Retirement System ("PERS"). Approximately 50% of SMUD's work-force is represented as to wages, hours and other terms and conditions of employment, by one of three recognized employee organizations, the International Brotherhood of Electrical Workers ("IBEW") Local 1245, the Organization of SMUD Employees ("OSE"), and the SMUD Public Safety Officers' Association ("PSOA"). The remaining 50% of SMUD's work-force, which includes managers, professional, administrative, supervisory, confidential and security staff, is unrepresented.

SMUD negotiated a four-year Memoranda of Understanding ("MOU") with IBEW and the OSE, effective January 1, 2022, through December 31, 2025. Both contracts contain a no-strike/no-lockout clause effective during the life of the agreements. SMUD has an MOU with PSOA effective through December 31, 2026. SMUD has experienced only one labor interruption, which occurred in January 1980 that lasted four days.

RETIREMENT BENEFITS AND POST-EMPLOYMENT MEDICAL BENEFITS

Pension Plans

SMUD participates in PERS, an agent multiple-employer public employee defined benefit pension plan. PERS provides retirement and disability benefits, annual cost-of-living adjustments, and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. Benefit provisions and all other requirements are established by State statute and SMUD policies. The pension plan provides retirement benefits, survivor benefits, and death and disability benefits based upon employees' years of credited service, age, and final compensation.

As of June 30, 2022, the last actuarial valuation date for SMUD's plan within PERS, the market value of the SMUD plan assets was \$2.32 billion. The plan is 87.8% funded on a market value of assets basis, a decrease of 12.3% compared to the June 30, 2021 funded status based on the market value of assets.

As an employer, SMUD is required to contribute a percentage of payroll each year to PERS to fund SMUD's plan based on actuarial valuations performed by PERS. PERS collects the normal cost based on a percentage of payroll and the unfunded liability portion is based on a dollar amount. SMUD also makes partial contributions required of SMUD employees on their behalf and for their account. At the PERS fiscal year ended June 30, 2023, SMUD's required employer contribution rate for normal cost was 8.9% of payroll and the unfunded liability contribution was \$22.4 million. During 2023, SMUD contributed \$37.4 million to PERS (including SMUD's contributions to cover required employee contributions), and SMUD employees paid \$18.3 million for their share of the PERS contribution.

For the fiscal years ending June 30, 2024 and June 30, 2025, SMUD is required to contribute 9.6% and 9.5% of payroll for normal costs and \$10.7 million for fiscal year ending June 30, 2025 for the unfunded liability contribution. There is no estimated employer contribution to the unfunded liability for fiscal year ending June 30, 2024. Assuming no amendments to the plan and no liability gains or losses (which can have a significant impact), PERS has projected that SMUD will be required to contribute 9.4% of payroll to the plan for normal costs and \$15.7 million for the unfunded liability for the fiscal year ending June 30, 2026, not including SMUD contributions to cover required employee contributions. The amount SMUD is required to contribute to PERS is expected to increase in the future. The actual amount of such increases

will depend on a variety of factors, including but not limited to investment returns, actuarial methods and assumptions, experience and retirement benefit adjustments.

SMUD has the option to prepay an annual lump sum payment to PERS for the unfunded accrued liability portion only (not including SMUD contributions to cover required employee contributions). SMUD made an annual lump sum prepayment of \$19.5 million, and also voluntarily made an additional payment of \$47.3 million, for the unfunded accrued liability for the fiscal year ended June 30, 2023. SMUD was not required to make an annual lump sum prepayment and, to date, has not voluntarily made additional payments for the unfunded accrued liability for the fiscal year ending June 30, 2024.

While SMUD has some ability to adjust the retirement benefits provided to its employees, PERS determines the actuarial methods and assumptions used with respect to assets administered by PERS (including the SMUD plan assets) and makes the investment decisions with respect to such assets. For a description of such actuarial methods and assumptions (including the smoothing conventions used by PERS when setting employer contribution rates) and investments, see the comprehensive annual financial report of PERS (SMUD's plan is part of the Public Employees' Retirement Fund of PERS) available on its website at www.calpers.ca.gov. SMUD cannot guarantee the accuracy of such information and neither the comprehensive annual financial report of PERS nor any other information contained on the PERS website is incorporated by reference in or part of this Official Statement. Actuarial assessments are "forward-looking" information that reflect the judgment of the fiduciaries of the pension plans, and are based upon a variety of assumptions, one or more of which may prove to be inaccurate or be changed in the future. Actuarial assessments will change with the future experience of the pension plans.

GASB issued statement No. 68 "Accounting and Financial Reporting for Pensions – An Amendment of GASB Statement No. 27" ("GASB No. 68"). The primary objective of GASB No. 68 is to improve accounting and financial reporting by state and local governments for pensions. Under GASB No. 68, SMUD is required to report the net pension asset or net pension liability (i.e., the difference between the total pension liability and the pension plan's net position or market value of assets) in its Statement of Net Position. This standard requires shorter amortization periods for recognition of non-investment gains and losses and actuarial assumption changes, as well as for recognition of investment gains and losses. GASB No. 68 separates financial reporting from funding requirements for pension plans. The net pension liability as of December 31, 2023 and December 31, 2022 is \$259.0 million and \$235.5 million, respectively.

SMUD provides its employees with two cash deferred compensation plans: one pursuant to Internal Revenue Code ("IRC") Section 401(k) (the "401(k) Plan") and one pursuant to IRC Section 457 (the "457 Plan" and collectively, the "Plans"). The Plans are contributory plans in which SMUD's employees contribute the funds. Each of SMUD's eligible full-time or permanent part-time employees may participate in either or both Plans, and amounts contributed by employees are vested immediately. Such funds are held by a trustee in trust for the employees upon retirement from SMUD service and, accordingly, are not subject to the general claims of SMUD's creditors. SMUD makes annual contributions to the 401(k) Plan on behalf of certain employees pursuant to a memorandum of understanding with both of its collective bargaining units. SMUD matches non-represented employee contributions to the 401(k) Plan up to a set amount. SMUD also makes limited discretionary contributions to non-represented employees hired after January 1, 2013, which contributions fully vest after five years. Prior to 2022, SMUD did not match employee contributions, nor make contributions on behalf of its employees to the 457 Plan. Beginning in 2022, SMUD makes annual contributions to the 457 Plan on behalf of certain employees and matches employee contributions up to a set amount pursuant to a memorandum of understanding with one of its collective bargaining units. SMUD made contributions to both Plans of \$6.9 million in 2023 and to the 401(k) Plan of \$7.0 million in 2022. Participating employees made contributions into both Plans totaling \$34.3 million in 2023 and \$32.4 million in 2022.

Other Post-Employment Benefits

SMUD provides post-employment healthcare benefits, in accordance with SMUD policy and negotiated agreements with employee representation groups in a single employer defined benefit plan, to all employees who retire from SMUD, and their dependents. SMUD also provides post-employment healthcare benefits to covered employees who are eligible for disability retirement. SMUD contributes the full cost of coverage for retirees hired before January 1, 1991, and a portion of the cost based on credited years of service for retirees hired after January 1, 1991. SMUD also contributes a portion of the costs of coverage for these retirees' dependents. Retirees are required to contribute the portion that is not paid by SMUD. The benefits, benefit levels, retiree contributions and employer contributions are governed by SMUD and can be amended by SMUD through its personnel manual and union contracts.

SMUD's post-employment health care benefits are funded through the PERS California Employers' Retiree Benefit Trust ("CERBT"), an agent multiple-employer plan. The funding of a plan occurs when the following events take place: the employer makes payments of benefits directly to or on behalf of a retiree or beneficiary; the employer makes premium payments to an insurer; or the employer irrevocably transfers assets to a trust or other third party acting in the role of trustee, where the plan assets are dedicated to the sole purpose of the payments of the plan benefits, and creditors of the government do not have access to those assets.

SMUD has elected to contribute the normal costs to the CERBT but annually receive reimbursement for cash benefit payments from the CERBT. In 2024, SMUD's contribution for the normal costs to CERBT is \$10.6 million. In 2023, SMUD made a contribution to the CERBT for normal costs in the amount of \$8.6 million. In 2022, SMUD decided to forgo making a contribution for the normal costs to the CERBT because there was a net OPEB asset at December 31, 2021. SMUD can elect to make additional contributions to the trust. During 2023 and 2022, SMUD made healthcare benefit contributions by paying actual medical costs of \$24.7 million and \$24.5 million, respectively. During 2023 and 2022, SMUD received \$24.4 million and \$23.3 million, respectively, reimbursement for cash benefit payments from the CERBT.

At June 30, 2023 and 2022, SMUD estimated that the actuarially determined accumulated post-employment benefit obligation was approximately \$403.6 and \$381.7 million, respectively. At June 30, 2023 and 2022, the plan was 92.3% and 97.9% funded, respectively.

SMUD's actuary uses PERS economic and other assumptions as the basis for the calculation of the post-employment benefit obligation. The actual accumulated post-employment benefit obligation will vary substantially if such PERS assumptions, such as interest rate and life expectancy, among others, prove to be inaccurate or different than SMUD's actual experience. Although SMUD believes that such assumptions and estimates are reasonable, no assurance can be given that any such assumptions will prove to be accurate, or that SMUD's actual accumulated post-employment benefit obligation will not materially exceed its estimates. Additional information is available in Note 15 (Other Postemployment Benefits) and "Required Supplementary Information" to SMUD's consolidated financial statements.

GASB previously issued SGAS No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other than Pensions". The primary objective of GASB No. 75 is to improve accounting and financial reporting by state and local governments for post-employment benefits other than pensions ("OPEB"). Under GASB No. 75, SMUD is required to report the net OPEB asset or net OPEB liability (i.e., the difference between the total OPEB liability and the OPEB plan's net position or market value of assets) in its Statement of Net Position. This standard requires shorter amortization periods for recognition of non-investment gains and losses and actuarial assumption changes, as well as for recognition of

investment gains and losses. The net OPEB liability as of December 31, 2023 and December 31, 2022 is \$25.3 million and \$6.8 million, respectively.

CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS

Estimated Capital Requirements

SMUD has a projected capital requirement of approximately \$2.8 billion for the period 2024 through 2028 as shown in the table below. Approximately 60% of this requirement is anticipated to be funded with internally generated funds and cash on hand.

Special projects include costs relating to construction of large substations and the construction of Solano Phase 4. The Estimated Capital Requirements table below includes \$51 million for Solano Phase 4. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – Solano 4 Project.”

ESTIMATED CAPITAL REQUIREMENTS (Dollars in Thousands)

	Service Area and Other System Improvements Including Distribution System	Improvements to Existing Generation Plant	General Plant	Special Projects	Total Capital Requirements
2024	\$193,180	\$58,070	\$132,454	\$169,315	\$553,019
2025	250,507	72,551	171,736	82,431	577,225
2026	237,026	108,614	138,112	64,880	548,632
2027	237,026	108,614	138,112	64,880	548,632
2028	237,026	108,614	138,112	64,880	548,632

Outstanding Indebtedness

General. SMUD typically finances its capital requirements through the sale of revenue bonds, the sale of commercial paper, from draws on its Revolving Credit Facility (as defined below) and from internally generated funds. With the enactment of the 2022 Inflation Reduction Act and the 2021 Infrastructure Investment and Jobs Act, SMUD is monitoring and exploring new methods of financing, including those afforded under these two federal laws, that provide not-for-profit public power utilities with direct federal incentive payments.

SMUD’s Electric Revenue Bonds (the “Senior Bonds”) are issued pursuant to Resolution No. 6649 (the “Senior Resolution”) adopted in 1971, as amended and supplemented (the “Senior Resolution”). As of December 31, 2023, SMUD had Senior Bonds in the aggregate principal amount of \$1,783,965,000 outstanding. The Senior Bonds are payable solely from the Net Revenues of SMUD’s Electric System. The Senior Bonds are subordinate in right of payment to the prior payment of “Maintenance and Operation Costs” and “Energy Payments” as defined in the Senior Resolution, including payments by SMUD to TANC under PA3, payments by SMUD under power purchase agreements related to the Authorities and payments by SMUD to NCGA and NCEA under their respective gas supply contracts. [Reference to 2024 Senior Bond plan of finance to come]

SMUD’s Subordinated Electric Revenue Bonds (the “Subordinated Bonds”) are issued pursuant to Resolution No. 85-11-1 of SMUD, adopted on November 7, 1985, as amended and supplemented (the

“Subordinate Resolution”). As of December 31, 2023, SMUD had Subordinated Bonds in the aggregate principal amount of \$332,020,000 outstanding. The Subordinated Bonds are payable solely from the Net Subordinated Revenues of SMUD’s Electric System. The Subordinated Bonds are subordinate in right of payment to the prior payment of principal of and interest on the Senior Bonds.

SMUD issues commercial paper notes (the “Notes”) from time to time. As of March 21, 2024, SMUD’s Notes were outstanding in the aggregate principal amount of \$150,000,000. Currently, Notes in the aggregate principal amount of \$400,000,000 may be outstanding at any one time, but SMUD reserves the right to increase or decrease the aggregate principal amount of the Notes that may be outstanding at any one time in the future. The Notes are secured by letters of credit issued by commercial banks. The Notes (and SMUD’s obligations to repay drawings under the letters of credit) are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Senior Bonds and the Subordinated Bonds. Drawings under the letters of credit, to the extent not repaid immediately from the proceeds of commercial paper or other available SMUD funds, are repayable with interest over a period of five years. The letters of credit currently expire in August of 2025 and March of 2027. [Reference to 2024 Senior Bond plan of finance to come]

SMUD also entered into a revolving credit agreement with a commercial bank and issued its taxable and tax-exempt revolving notes thereunder (collectively, the “Revolving Credit Facility”) in February 2022. As of December 31, 2023, no principal amount was outstanding under the Revolving Credit Facility. Currently, the aggregate principal amount that can be outstanding under the Revolving Credit Facility at any one time is limited to \$100,000,000. However, SMUD reserves the right to increase or decrease the aggregate principal amount that can be outstanding at any one time under the Revolving Credit Facility in the future. SMUD’s payment obligations under the Revolving Credit Facility are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Senior Bonds and the Subordinated Bonds. The current term of the Revolving Credit Facility expires in February 2026.

Joint Powers Authorities. SMUD has entered into long-term take-or-pay power purchase agreements with SFA relating to the Local Gas-Fired Plants. Under such agreements, SMUD has exclusive control of the dispatch of all five of the Local Gas-Fired Plants and takes all of the power produced by the Local Gas-Fired Plants. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – Local Gas-Fired Plants.” The Authorities are each treated as component units of SMUD for accounting purposes. Only SFA has outstanding debt, which relates solely to the Cosumnes Power Plant and is payable solely from capacity payments made by SMUD under the related power purchase agreement. As of December 31, 2023, bonds issued by SFA to finance the Cosumnes Power Plant were outstanding in the aggregate principal amount of \$87,890,000. SMUD’s payments under the power purchase agreements relating to the Local Gas-Fired Plants are payable from revenues of SMUD’s Electric System prior to the payment of principal of and interest on the Senior Bonds and Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and Subordinate Resolution.

SMUD and Sacramento Municipal Utility District Financing Authority formed NCGA as a joint powers authority. NCGA is treated as a component unit of SMUD for accounting purposes. NCGA issued \$757,055,000 in bonds in May 2007 for the purpose of paying Morgan Stanley Capital Group in advance for natural gas to be delivered to NCGA and then sold to SMUD pursuant to a long-term purchase contract. SMUD’s obligation under the purchase contract is limited to payment for gas supplies delivered by NCGA. SMUD’s payments under the purchase contract are payable from revenues of SMUD’s Electric System prior to the payment of principal and interest on the Senior Bonds and the Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution. SMUD is not obligated to make any payments in respect of debt service on the

NCGA bonds. As of December 31, 2023, related bonds in the aggregate principal amount of \$120,070,000 remain outstanding.

SMUD and Sacramento Municipal Utility District Financing Authority formed NCEA as a joint powers authority. NCEA is treated as a component unit of SMUD for accounting purposes. NCEA issued \$539,615,000 in bonds in December 2018 for the purpose of paying J. Aron & Company LLC in advance for natural gas or electricity to be delivered to NCEA and then sold to SMUD pursuant to a long-term purchase contract. SMUD’s obligation under the purchase contract is limited to payment for gas or electricity supplies delivered by NCEA. SMUD’s payments under the purchase contract are payable from revenues of SMUD’s Electric System prior to the payment of principal and interest on the Senior Bonds and the Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution. SMUD is not obligated to make any payments in respect of debt service on the NCEA bonds. [As of December 31, 2023, related bonds in the aggregate principal amount of 537,295,000 remain outstanding. As described in the forepart of this Official Statement, the bonds issued by NCEA in 2018 are expected to be refunded with proceeds of the Bonds (as defined in the forepart of this Official Statement).] [to be revised for 2024 Senior Bond offering documents]

Interest Rate Swap Agreements. SMUD has two interest rate swap agreements relating to previously or currently outstanding Subordinated Bonds, as shown in the following table. For more information, see Note 9 (Derivative Financial Instruments) to SMUD’s consolidated financial statements.

Effective Date	Termination Date	SMUD Pays		SMUD Receives	Notional Amount (000's)	Counterparty
7/2/1997	7/1/2024	Floating	SIFMA	5.154%	\$19,570	J Aron & Company LLC
07/12/2023	08/15/2041	Fixed	0.718%	[70% of 1M SOFR]	132,020	Barclays Bank

The obligations of SMUD under the swap agreements are not secured by a pledge of revenues of SMUD’s electric system or any other property of SMUD. SMUD does not currently have any collateral posting requirements with respect to the interest rate swap agreements, but SMUD may be required to post collateral under certain circumstances.

Build America Bonds Subsidy Payments. SMUD’s Electric Revenue Bonds, 2009 Series V (the “2009 Series V Bonds”) and Electric Revenue Bonds, 2010 Series W (the “2010 Series W Bonds”) were issued as “Build America Bonds” under the provisions of the American Recovery and Reinvestment Act of 2009. At the time the 2009 Series V Bonds and 2010 Series W Bonds were issued, SMUD expected to receive an annual cash subsidy payment from the United States Treasury equal to 35% of the interest payable on the 2009 Series V Bonds and the 2010 Series W Bonds. However, as a result of the federal budget process, many payments from the federal government, including Build America Bonds subsidy payments, have been reduced. Absent the federal budget reductions, the aggregate annual cash subsidy payable to SMUD with respect to the 2009 Series V Bonds and the 2010 Series W Bonds would be approximately \$9.8 million. With the current federal budget reductions, SMUD has typically been receiving aggregate annual cash subsidy payments with respect to the 2009 Series V Bonds and the 2010 Series W Bonds of approximately \$9.2 million. It is possible that future federal budget actions could further reduce, or eliminate entirely, the annual cash subsidy payments with respect to Build America Bonds, including the annual cash subsidy payments payable to SMUD with respect to the 2009 Series V Bonds and the 2010 Series W Bonds. SMUD cannot predict the likelihood of the further reduction or elimination of the Build America Bonds subsidy payments. A significant reduction or elimination of the cash subsidy

payments payable to SMUD with respect to the 2009 Series V Bonds or the 2010 Series W Bonds could be material. [Reference to 2024 Senior Bonds plan of finance to come]

Debt Service Requirements. The table on the following page sets forth SMUD’s debt service requirements with respect to SMUD’s Senior Bonds and Subordinated Bonds.

DEBT SERVICE REQUIREMENTS[TO BE CONFIRMED/UPDATED] ⁽¹⁾

Calendar Year	Senior Bonds Debt Service⁽²⁾	Subordinated Bonds Debt Service⁽³⁾	Total Debt Service
2024	\$ 179,657,209	\$ 11,684,323	\$ 191,341,531
2025	178,911,687	11,780,665	190,692,352
2026	179,010,287	8,447,772	187,458,059
2027	179,097,037	8,947,772	188,044,809
2028	179,208,038	8,948,211	188,156,249
2029	127,829,725	8,947,332	136,777,056
2030	137,903,979	9,781,105	147,685,083
2031	143,512,870	6,447,772	149,960,641
2032	143,353,133	6,948,211	150,301,344
2033	143,215,040	6,947,332	150,162,371
2034	137,669,794	18,587,534	156,257,327
2035	138,018,961	18,159,537	156,178,498
2036	138,370,189	17,729,456	156,099,645
2037	78,304,801	25,303,354	103,608,154
2038	77,946,301	25,618,890	103,565,191
2039	74,594,300	25,935,859	100,530,159
2040	74,393,300	26,254,804	100,648,104
2041	79,238,550	26,889,177	106,127,727
2042	49,163,850	28,490,000	77,653,850
2043	48,951,650	28,490,300	77,441,950
2044	48,747,750	28,490,350	77,238,100
2045	48,539,450	28,494,550	77,034,000
2046	43,129,500	28,492,150	71,621,650
2047	43,129,500	28,492,700	71,622,200
2048	43,134,750	28,490,450	71,625,200
2049	43,131,000	28,489,800	71,620,800
2050	43,134,500	--	43,134,500
2051	17,740,500	--	17,740,500
2052	17,739,250	--	17,739,250
2053	17,739,750	--	17,739,750
Total	\$2,854,516,645	\$501,289,405	\$3,355,806,050

(1) Does not include outstanding bonds issued by the Authorities for the Local Gas-Fired Plants. Does not include bonds issued by NCGA, NCEA or SMUD’s portion of bonds issued by TANC. Payments by SMUD which are used by the Authorities, NCGA, NCEA, and TANC to pay debt service on such bonds constitute either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution.

(2) Debt service is not reduced by the amount of any subsidy that SMUD currently expects to receive in connection with the 2009 Series V Bonds and 2010 Series W Bonds.

(3) Based on an assumed interest rate of 3% per annum following (i) the initial scheduled Mandatory Purchase Date of October 15, 2030 for SMUD’s Subordinated Electric Revenue Refunding Bonds, 2023 Series D and (ii) the initial scheduled Mandatory Purchase Date of October 15, 2025 for SMUD’s Subordinated Electric Revenue Bonds, 2019 Series B.

Note: Amounts may not add due to rounding.

INSURANCE

SMUD maintains a comprehensive property/casualty insurance program designed to protect against catastrophic losses that would have an adverse effect on its financial position or operational capabilities. Insurance programs are continuously reviewed and modified when construction, operational exposures, or developments in the insurance industry so warrant. Long term relationships with a variety of insurers minimize SMUD's susceptibility to the effects of market cycles. SMUD budgets reserves to meet potential insurance deductibles and self-insured liability claims.

SMUD safeguards assets with all-risk property and boiler/machinery insurance with limits of \$800 million per occurrence for physical damage and business interruption combined. Various coverage sublimits and deductibles apply to losses arising from certain perils, such as business interruption, earthquake, or flood, respectively. Liability insurance is in effect to defend and indemnify SMUD against third party claims, including general, automobile and sudden and accidental pollution claims with policy limits of \$140 million, and wildfire coverage with policy limits of \$275 million, all of which include a variety of self-insured retentions.

Nuclear property and liability insurance policies are maintained in accordance with the NRC's requirements for decommissioned nuclear plants that maintain dry storage of spent fuel on-site. This includes \$100 million in first party property damage and decontamination, \$100 million for nuclear liability arising from accidents on-site, \$200 million for supplier's and transporter's nuclear liability, and \$300 million for nuclear worker liability. SMUD is exposed to possible retrospective assessments for nuclear property events occurring at other nuclear facilities in the United States capped at ten times SMUD's annual nuclear property premium (currently the maximum retrospective assessment is approximately \$1,000,000).

Other types of insurance include non-owned aircraft liability, workers' compensation, crime, cyber security, fidelity, fiduciary liability, directors' and officers' liability, professional errors and omissions, transportation, and builder's risk for major facilities under construction.

LEGAL PROCEEDINGS

SMUD is a party to numerous actions arising out of the conduct of its business and affairs, some of which are discussed below. SMUD believes that any losses or adverse financial results it may suffer in these current actions, to the extent not covered by insurance, would not, in the aggregate, have an adverse material impact on SMUD, its business and affairs, or results of operations, financial position or liquidity.

Environmental Litigation

SMUD was one of many potentially responsible parties that had been named in a number of actions relating to environmental claims and/or complaints. SMUD has resolved these environmental claims and/or complaints and entered into settlement agreements and/or consent orders. These settlement agreements and consent orders have statutory reopener provisions which allow regulatory agencies to seek additional funds for environmental remediation under certain limited circumstances. While SMUD believes it is unlikely that any of the prior settlements or consent orders will be reopened, the possibility exists. If any of the settlements or consent orders were to be reopened, SMUD believes that the outcome will not have a material adverse impact on SMUD's financial position, liquidity, or results of operations.

Proposition 26 Lawsuit

In October 2019, two SMUD customers jointly filed a complaint against SMUD (subsequently one of the customers removed themselves from the complaint), which stated that SMUD's Board violated

Proposition 26 (see “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – Proposition 26” for a description of Proposition 26) when on June 24, 2019, it adopted rate increases for 2020 and 2021. The plaintiff contended the rate increases did not reflect SMUD’s reasonable cost of service because they included a 9.2% scalar that SMUD applies to its TOD residential rate restructure adopted by SMUD’s Board in the 2017 rate process. SMUD viewed the lawsuit as having little merit and while SMUD anticipated the court would rule in SMUD’s favor on substantive grounds, the plaintiff in early 2024 agreed to dismiss the lawsuit with prejudice due to their failure to diligently prosecute the case. On January 16, 2024, the court approved the dismissal.

On January 19, 2024, the same plaintiff, along with a second SMUD residential customer, jointly filed a new complaint challenging the September 21, 2023, SMUD Board adoption of 2024 and 2025 rate increases. The plaintiffs make a similar claim regarding the TOD scalar as the prior lawsuit. Given the little merit behind the lawsuit, SMUD believes the court will rule in its favor. However, SMUD is unable to predict the outcome of the case or, if or to the extent SMUD ultimately is not successful in the litigation, what remedies against SMUD may be available. SMUD believes that if it is not successful in the litigation, and to the extent the outcome would have a material adverse impact on SMUD’s financial position, liquidity, or results of operations, the Board would make appropriate rate modifications based on an evidentiary record consistent with guidance from a judicial decision in the case.

Other Litigation Matters

Currently, SMUD is party to various claims, legal actions and complaints relating to its operations, including, but not limited to, property damage, personal injury, contract disputes, and employment matters. SMUD believes that the ultimate resolution of these matters will not have a material adverse effect on SMUD’s financial position, liquidity, or results of operations.

FERC Administrative Proceedings

SMUD is involved in a number of FERC administrative proceedings related to the operation of wholesale energy markets, regional transmission planning, gas transportation and NERC reliability standards. These proceedings generally fall into the following categories: (i) filings initiated by the CAISO (or other market participants) to adopt/modify the CAISO Tariff and/or establish market design and behavior rules; (ii) filings initiated by existing transmission owners (i.e., PG&E and the other IOUs) to pass-through costs to their existing wholesale transmission customers; (iii) filings initiated by FERC on market participants to establish market design and behavior rules or investigate market behavior by certain market participants; (iv) filings initiated by transmission owners under their transmission owner tariffs to establish a regional transmission planning process; (v) filings initiated by providers of firm gas transportation services under the Natural Gas Act; and (vi) filings initiated by NERC to develop reliability standards applicable to owners, users, and operators of the bulk electric system. In addition, SMUD is an active participant in other FERC administrative proceedings, including those related to reliability, variable resource integration and the changing resource mix, and transmission planning and cost allocation. SMUD believes that determinations of these FERC proceedings will not have a material adverse effect on SMUD’s financial position, liquidity or results of operations.

CPUC Administrative Proceedings

Periodically, PG&E seeks to update its gas transmission and storage (“GT&S”) revenue requirements and rate designs. These applications are litigated at the CPUC and affect SMUD through several tariff rates SMUD pays to move natural gas along PG&E’s backbone transmission lines. In the 2019 GT&S rate case (the “2019 GT&S Case”), the CPUC affirmed the application in GT&S rates of cost causation principles to prevent excessive and unreasonable costs being shifted to electric generator

backbone customers like SMUD, either through proposed changes in PG&E’s natural gas storage strategy or through cost shifts within the electric generator customer class.

PG&E filed its 2023 General Rate Case (the “GRC”) in June 2021 which includes its gas transmission and storage revenue requirements. In September 2021, PG&E filed an application for approval of its Gas Cost Allocation and Rate Design Proposals (“CARD”). The CPUC issued a decision in the GRC in November 2023 authorizing PG&E’s revenue requirements for the four-year rate period of 2023-2026. SMUD is a party to the comprehensive all-party settlement agreement submitted to the CPUC for approval in June 2023 which, if approved, would resolve all open issues in the CARD proceeding. SMUD does not believe that determinations of these CPUC proceedings will have a material adverse effect on SMUD’s financial position, liquidity or results of operations. SMUD will continue to actively participate in PG&E’s GRC and CARD proceedings to ensure that costs are fairly allocated to non-core customers, including electric generator backbone customers.

In the GRC, the CPUC directed PG&E to submit an application to revise its natural gas curtailment procedures “similar to the curtailment procedures of other large energy utilities”. SMUD will actively participate in this future proceeding.

Separately, SMUD continues to participate and monitor a proceeding at the CPUC concerning long-term gas system planning. At this point in these proceedings, SMUD does not anticipate that the ultimate resolution of such cases will have a material adverse effect on SMUD’s financial position, liquidity, or results of operation.

SMUD monitors a number of other CPUC proceedings. These proceedings generally fall into the following categories: (i) filings initiated by PG&E to adopt/modify its tariffs and/or rules; (ii) rulemakings initiated by the CPUC to establish market design and behavior rules or program rules affecting SMUD customers; and (iii) rulemakings initiated by the CPUC to establish electric and/or gas system safety design and maintenance rules. SMUD believes that determinations of these CPUC proceedings will not have a material adverse effect on SMUD’s financial position, liquidity or results of operations.

DEVELOPMENTS IN THE ENERGY SECTOR

California Electric Market

In 1996, the State partially deregulated its electric energy market and the CAISO was established in 1998. Since the CAISO’s formation, the State has experienced episodes of higher and more volatile prices for natural gas and wholesale electricity. In reaction to such conditions, SMUD made significant changes to its business strategy to mitigate the impacts of the more volatile and unpredictable energy markets. Volatility in energy prices in the State are always a potential risk due to a variety of factors which affect both the supply and demand for electricity in the western United States. These factors include, but are not limited to, the implementation of the CAISO market design changes, insufficient generation resources, the increase in intermittent renewable energy resources, natural gas price volatility, fuel costs and availability, weather and natural disasters, transmission constraints and levels of hydroelectric generation within the region. While SMUD has taken a number of steps to mitigate its exposure to price volatility associated with these factors, this price volatility under extreme conditions may contribute to greater volatility in SMUD’s net revenues from the purchase and sale of electric energy and, therefore, could materially adversely affect the financial condition and liquidity of SMUD. For a discussion of SMUD’s current resource planning activities and risk management strategies, see “BUSINESS STRATEGY” above.

Cybersecurity

Cybersecurity continues to be a top priority for SMUD. Attacks or threats directed at critical electric or energy sector operations could damage or cause the shut-down of generation, transmission or distribution assets that are essential to SMUD's ability to serve its customers, cause operational malfunctions and outages affecting SMUD's electric system, and result in costly recovery and remediation efforts. The costs of security measures or of remedying breaches could be material.

SMUD participates in sharing and receiving information about cyber security threats in real-time through the Electricity Information Sharing and Analysis Center ("E-ISAC"), the central hub for such data to actively manage risk related to potential cyber intrusion. SMUD also participates in NERC's development of mandatory, enforceable cyber security standards to address vulnerabilities in electric utility systems. SMUD also adopts voluntary measures suggested as best practices by the National Institute of Standards and Technology ("NIST") in its national framework.

SMUD's prudent response to this ever-changing threat requires constant monitoring and frequent updates to implement new regulatory requirements as they are developed. SMUD manages risk related to frequently changing regulatory requirements by participating in the development of standards at NERC and NIST and through active engagement in the cyber security policy dialogue in Congress.

Physical Security

Physical security is a critical concern for electric utilities as they seek to protect their infrastructure from a range of threats. The electric utility infrastructure is complex and consists of multiple components, such as power plants, substations, transmission and distribution lines, and other facilities. SMUD employs a dedicated physical security team that is deployed 24/7 and allows SMUD to respond to emergent events in a safe, coordinated, efficient, and cohesive manner, protecting the lives of its employees, customers, community, properties and assets. SMUD has policies, processes and procedures in place that outline the access controls and restrictions for its properties. SMUD restricts access based on need as it determines, while adhering to applicable laws, regulations and standards such as NERC Reliability Standards and NRC regulations. SMUD also maintains a Utility Security Plan adopted by the Board representing SMUD's compliance with the CPUC's Safety and Enforcement Division six-step security plan process described in CPUC Decision 19-01-018.

During times of elevated, imminent threats, safety and/or security concerns, SMUD's Security Operations team, under the direction of the Chief Financial Officer or delegate, reserves the right to deploy additional security measures, controls, and further restrict or limit access to its properties to increase its security posture.

SMUD operates a 24/7 security operations center which monitors and coordinates responses to situations reported by internal and external stakeholders, or which are detected by SMUD's security technology. The technology includes access control, video surveillance, and various types of intrusion detection solutions. The security operations center is a central hub for initial contact for physical security calls from employees of suspicious events and initiates incident responses as needed.

Federal Legislation and Regulatory Proceedings

Energy Policy Act of 2005. On August 8, 2005, the Energy Policy Act of 2005 (the "EPAct of 2005") was signed into law. The law includes a number of energy-related provisions, including among other things limited FERC jurisdiction over interstate transmission assets of municipal utilities, cooperatives and federal utilities to order these entities to provide transmission services on rates and terms

comparable to those the entities charge and provide to themselves; the grant of authority to FERC to establish and certify an electric reliability organization to develop and enforce reliability standards for users of the bulk power transmission system; and prohibitions of certain market practices including the provision of false information and related expansion of FERC civil and criminal penalty authority. So far, the most visible impact of the EAct of 2005 on SMUD has been the development of mandatory federal reliability standards.

Federal Regulation of Transmission Access. The Energy Policy Act of 1992 (the “Energy Policy Act”) made fundamental changes in the federal regulation of the electric utility industry, particularly in the area of transmission access. The Energy Policy Act provided FERC with the authority to require a transmitting utility to provide transmission services at rates, charges, terms and conditions set by FERC. The purpose of these changes, in part, was to bring about increased competition in the electric utility industry. Under the Energy Policy Act, electric utilities owned by municipalities and other public agencies which own or operate electric power transmission facilities which are used for the sale of electric energy at wholesale are “transmitting utilities” subject to the requirements of the Energy Policy Act.

Since the Energy Policy Act, FERC has adopted a series of rules to implement competitive open access to transmission facilities and regional transmission planning. Order No. 888, issued in 1996, requires the provision of open access transmission services on a nondiscriminatory basis by all “jurisdictional utilities” (which, by definition, does not include municipal entities like SMUD) by requiring all such utilities to file OATTs. Order No. 888 also requires “nonjurisdictional utilities” (which, by definition, does include SMUD) that purchase transmission services from a jurisdictional utility under an open access tariff and that owns or controls transmission facilities to provide open access service to the jurisdictional utility under terms that are comparable to the service that the nonjurisdictional utility provides itself. Section 211A of the EAct of 2005 authorizes, but does not require, FERC to order unregulated transmission utilities to provide transmission services, including rates and terms and conditions, that are comparable to those under which the unregulated transmitting utility provides transmission services to itself that are not unduly discriminatory or preferential – often referred to as the reciprocity rule.

In Order 890, issued in 2007, FERC stated that it will implement its authority under Section 211A on a case-by-case basis and retain the current reciprocity provisions.

In 2011, FERC issued Order 1000, which among other things requires public utility (jurisdictional) transmission providers to participate in a regional transmission planning process that produces a regional transmission plan and that incorporates a regional and inter-regional cost allocation methodology. Similar to Order 890, FERC states that it will implement its authority under Section 211A on a case-by-case basis. However, in Order 1000, FERC appears to expand upon the current reciprocity provisions and states that it has the authority to allocate costs to beneficiaries of services provided by specific transmission facilities even in the absence of a contractual relationship between the owner of the transmission facilities and the identified beneficiary.

SMUD, individually, and through the Large Public Power Council (“LPPC”), appealed Order 1000, but in 2014 the D.C. Circuit Court of Appeals rejected all of the arguments raised on appeal, upholding the entirety of Order 1000.

The jurisdictional members of WestConnect filed their proposed regional planning process and cost allocation methodology through a series of compliance filings at FERC. FERC accepted binding cost allocation for jurisdictional transmission providers of WestConnect and mandated that non-jurisdictional transmission providers (such as SMUD) identified as beneficiaries of a project have the ability to not accept the cost allocation. WestConnect’s Order 1000 planning process began with the 2016-2017 planning cycle.

However, in response to FERC’s WestConnect orders on compliance, El Paso Electric Company (“El Paso”), a jurisdictional transmission provider, petitioned to the Court of Appeals for the 5th Circuit. El Paso contends that FERC’s WestConnect orders violate Order 1000’s cost causation principle because WestConnect’s binding cost allocation applies only to the jurisdictional transmission providers and thus forces jurisdictional transmission providers to subsidize projects benefitting non-jurisdictional transmission providers that opt-out of projects. The non-jurisdictional transmission providers agreed on a settlement with the jurisdictional transmission providers to resolve the matters on appeal in the 5th Circuit, but FERC ultimately did not accept the settlement. On August 2, 2023, the court reversed FERC’s orders implementing Order No. 1000 for WestConnect concerning cost allocation of regional transmission projects to non-jurisdictional transmission providers. The court found that the WestConnect orders are incompatible with Order No. 1000’s application of the cost causation principle to address free ridership. There is uncertainty at this time on the future of WestConnect’s regional planning process. FERC has not yet acted on its own in light of the Fifth Circuit’s decision, and it is uncertain whether it will act while it is working on an updated transmission planning and cost allocation proposal that would change the Order 1000 process (as further discussed below regarding the April 21, 2022 Notice of Proposed Rulemaking). It is also uncertain if and/or the extent to which the jurisdictional transmission providers in WestConnect will file revisions to the regional transmission planning provisions in their OATTs. In the meantime, the WestConnect planning has continued under the existing framework and SMUD, along with the other non-jurisdictional transmission providers, continue to participate in the WestConnect process. SMUD’s long-standing objective is to comply with open access requirements necessary to achieve reciprocity, including through participation in a regional planning process while not binding itself to mandatory cost allocation. Thus, SMUD has an interest in continuing to explore options for participation in a regional transmission planning process if the WestConnect rules no longer permit SMUD to reasonably participate consistent with its business and jurisdictional interests.

SMUD is unable to predict at this time the full impact that Order 1000, or the 5th Circuit’s August decision, will have on the operations and finances of SMUD’s electric system or the WestConnect region generally. However, WestConnect has conducted multiple planning cycles under its Order 1000 planning process and has not identified any project eligible for cost allocation. SMUD will continue to take any action necessary, including withdrawing from a cost allocation determination or planning region, and engaging in FERC proceedings, to ensure that it is not required to pay for transmission costs in the absence of an agreement or service relationship.

On April 21, 2022, FERC issued a Notice of Proposed Rulemaking on Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection (the “NOPR”). The NOPR seeks input on proposals that would impact the Order 1000 planning and cost allocation process. SMUD has been engaged in the proceeding, providing input and helping draft comments with trade organizations, including LPPC. FERC has not issued any subsequent order. SMUD will continue to monitor and be engaged in any developments at FERC that impact the Order 1000 process and its regional transmission planning participation.

NERC Reliability Standards. The EPAct of 2005 required FERC to certify an electric reliability organization (“ERO”) to develop mandatory and enforceable reliability standards, subject to FERC review and approval. On February 3, 2006, FERC issued Order 672, which certified NERC as the ERO. Many reliability standards have since been approved by FERC, including those aimed at protecting the bulk electric system from physical and cyber threats.

The ERO or the regional entities, such as WECC, may enforce the reliability standards, subject to FERC oversight or FERC may independently enforce reliability standards. Potential monetary sanctions include fines of up to \$1,544,521 per violation per day. Order 693 provides ERO and regional entities with

the discretion necessary to assess penalties for such violations, while also having discretion to calculate a penalty without collecting the penalty if circumstances warrant.

Anti-Market Manipulation Rules. EPCRA of 2005 gave FERC the authority to issue rules to prevent market manipulation in jurisdictional wholesale power and gas markets, and in jurisdictional transmission and transportation services. These anti-market manipulation rules apply to non-jurisdictional entities such as SMUD. Further, EPCRA of 2005 provided FERC civil penalty authority, which the Commission has stated that it will exercise carefully by assuring that its market manipulation rules are clear.

Greenhouse Gas Emissions. Since 2009, the United States Environmental Protection Agency (the “EPA”) has taken steps to regulate GHG emissions from different sources, including from the electric sector.

In 2014, EPA issued a proposed rule under section 111(d) of the Clean Air Act (“CAA”) called the Clean Power Plan (the “CPP”) that projected power sector emissions reductions of 30% below 2005 levels by 2030. The proposed CPP would have established a rate-based emissions goal for each state, providing states the responsibility to develop a State Implementation Plan (“SIP”) describing how each will meet the goal assigned by EPA using the “Best System of Emissions Reduction” (“BSER”) established by EPA. The rule was finalized in October 2015.

In November 2015, 27 states and numerous corporations challenged the CPP in court, alleging that EPA had exceeded its authority under the CAA; however, before the issue could be decided by the court, the 2016 presidential election resulted in a change of administration. The new administration quickly moved for an abeyance (or stay) of the case for as long as the agency needed to review and withdraw the CPP. The U.S. Supreme Court stayed implementation of the CPP pending disposition in the D.C. Circuit and any subsequent review by the Supreme Court. In August 2018, EPA proceeded to withdraw the CPP and the D.C. Circuit ultimately dismissed the case on September 17, 2019. EPA proposed a different rule under the same provision of the CAA, known as the Affordable Clean Energy (“ACE”) rule, which would have established a BSER that only includes measures that can be undertaken at an individual power plant, rather than the broader suite of measures envisioned under the CPP. The ACE rule was challenged in court by environmental groups and states alleging that the revised rule inadequately responds to EPA’s responsibility to protect public health and welfare. SMUD joined in this litigation along with other challengers. The D.C. Circuit vacated the ACE rule on January 19, 2021, and remanded it to the EPA for review and revision, just days before a new presidential administration took office. Several states led by West Virginia and coal industry members appealed the decision.

In June 2022, the U.S. Supreme Court issued its opinion in *West Virginia v. EPA*, striking down the CPP and foreclosing any future regulations of “significant political and economic significance” if Congress has not expressly authorized them. While the decision does not restrict EPA to only requiring measures “inside the fence line” at an individual power plant to control GHGs, it appears unlikely that the EPA will be able to require material reductions in GHGs to mitigate climate change through section 111(d) of the CAA.

Under the new presidential administration, in May 2023, the EPA issued a proposed rule under Section 111(d) of the CAA to reduce GHG emissions from existing and new power plants. The four-part proposed rule, *New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule*, would set forth GHG emission standards for certain subcategories of new and existing fossil fuel-fired power plants operating greater than 50% of the time and generating more than 300 MW per turbine. In the proposed rule, EPA determined the BSER is either deploying carbon capture and storage

technology to capture 90% of emissions or co-firing 96% hydrogen produced through a low-emission process (“low-GHG hydrogen”). If finalized, compliance is required by 2032. SMUD has filed comments as part of several trade groups and coalitions in response to the proposed rule. SMUD’s internal analysis shows the rule as proposed would not require changes at any of its currently-operating fossil-fueled power plants and therefore will not have a material impact on SMUD’s financial position, operations, or liquidity.

Federal Communications Commission

The 1978 Pole Attachment Act added section 224 to the Communications Act of 1934, authorizing the Federal Communications Commission (“FCC”) to regulate attachments by cable television systems or providers of telecommunications service to utility poles, ducts, conduits, and rights-of-way. Under Section 224(a)(1), public power entities are exempt from FCC pole attachment regulations, as municipally-owned poles are already subject to local decision-making processes and governance. The municipal exemption from FCC pole attachment regulations was further codified through the enactment of the Telecommunications Act of 1996. However, over the past decade, this exemption has been continuously eroded.

Various actions by the FCC have limited the exemption in support of a “uniform policy for broadband access to privately-owned physical infrastructure.” Through four orders issued between 2017 and 2018, the FCC set strict time limits for the review of pole attachment applications and preempted state and local agreements on pole attachments. In 2020, in *City of Portland v United States*, the U.S. Court of Appeals for the Ninth Circuit upheld the FCC’s Small Cell Order, which adopted new time limits for municipal utilities’ review of wireless infrastructure siting applications and preempted access fees for small cells. In November 2023, the FCC adopted its Fourth Report and Order, Declaratory Ruling, and Third Further Notice of Proposed Rulemaking that would reform pole replacement rules and facilitate the approval process for pole attachment applications, among other things. SMUD will monitor this proceeding for any potential impact to SMUD.

SMUD is unable to predict whether any new FCC rulemakings will impact the operations and finances of SMUD’s electric system.

Federal Clean Energy Legislation. SMUD actively participates in discussion at the federal level regarding legislation that would meaningfully impact SMUD’s existing GHG reduction strategies or impose new requirements for electric generators, including a proposed federal clean energy standard. In the 117th Congress, a clean electricity performance program was considered but ultimately lacked support to pass. Instead, Congress extended and expanded clean energy tax credits and created new grant and rebate programs to incentivize clean energy investments in the Inflation Reduction Act of 2022. While it is possible that a future Congress may revisit the concept of a clean energy standard or other GHG reduction regime, it is possible that the passage of the Inflation Reduction Act will diminish the likelihood of a new regulatory framework being enacted in the near future.

SMUD is unable to predict whether any new EPA rulemakings will be undertaken, and what the full impact of the reduction of fossil-based generation over time will have on the operations and finances of SMUD’s electric system or the electric utility industry generally.

State Legislation and Regulatory Proceedings

A number of bills affecting the electric utility industry have been enacted by the State Legislature. In general, these bills provide for reduced GHG emission standards and greater investment in energy efficient and environmentally friendly generation alternatives through more stringent RPS. Additionally, ongoing regulatory proceedings address the implementation of these bills as well as water flow and quality

issues related to the Sacramento – San Joaquin River Delta. The following is a brief summary of these bills and regulatory proceedings.

Greenhouse Gas Emissions. On September 27, 2006, the Governor of the State signed into law AB 32, the Global Warming Solutions Act of 2006 (“AB 32”). AB 32 requires the California Air Resources Board (“CARB”) to adopt enforceable GHG emission limits and emission reduction measures in order to reduce GHG emissions to 1990 levels by 2020. In addition, AB 32 establishes a mandatory reporting program for all IOUs, local, publicly-owned electric utilities and other load-serving entities (electric utilities providing energy to end-use customers) (“LSEs”). The AB 32 reporting program allows CARB to adopt regulations using market-based compliance mechanisms such as a “cap-and-trade” system.

On December 16, 2010, CARB approved a resolution adopting cap-and-trade regulations for the State. The regulations became effective on January 1, 2012. As adopted, the cap-and-trade program covers sources accounting for 85% of the State’s GHG emissions, the largest program of its type in the United States. In November of 2012, CARB conducted its first allowance auction and auctions now occur on a quarterly schedule.

The cap-and-trade program introduced a hard emissions cap that declines over time on the combined electric utility and large industrial sectors, covering all sources emitting more than 25,000 metric tons of carbon dioxide-equivalent greenhouse gases (“CO₂e”) per year, and was subsequently expanded to cover distributors of transportation, natural gas, and other fossil fuels. The cap-and-trade program requires covered entities to retire compliance instruments (allowances and carbon offsets) for each metric ton of CO₂e they emit. CARB has allocated free allowances to LSEs to mitigate the compliance cost burden on ratepayers. The value of allowances must be used to benefit ratepayers and achieve GHG emission reductions. The cap-and-trade program also allows covered entities to use offset credits for compliance purposes (not exceeding 8% of a regulated entity’s compliance obligation through 2020, 4% from 2021 through 2025, and 6% from 2026 through 2030). Offsets must be obtained from certified projects in sectors that are not regulated under the cap-and-trade program and are subject to other restrictions.

The State's cap-and-trade program was briefly linked to companion program in the Canadian province of Ontario during 2018 but was de-linked following a political change. In 2021, the Washington state legislature passed a cap-and-trade bill, which is expected to interact with the State’s markets. Future potential near-term links to the CARB cap-and-trade program also include the states of Oregon, which has adopted a cap-and-trade program, and New Mexico, which is considering the adoption of a cap-and-trade program.

On October 7, 2015, SB 350 was enacted, containing aggressive goals for reducing carbon emissions by 2030, including raising the proportion of renewable energy to 50%, reducing the use of petroleum fuel in cars and trucks by up to 50%, and doubling the energy efficiency of existing buildings. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*” for additional information. In addition, SB 350 established requirements for larger POUs to adopt and file with the CEC Integrated Resource Plans (“IRPs”) by April 2019 that would show planned procurement to achieve the 50% RPS and State GHG goals established by CARB. The CEC developed “guidelines” for these IRPs for POUs in 2017, updated them in 2018, and proposed additional updates in 2022. CARB established specific GHG target ranges for these IRPs in summer 2018, which were revised in 2023 following the adoption of CARB’s 2022 Scoping Plan. SMUD developed and adopted an IRP in 2018 through a comprehensive public process and filed the adopted IRP with the CEC in April 2019. SMUD adopted an updated IRP in June 2022 and filed the updated IRP with the CEC in September 2022, but the CEC has not yet completed its review of SMUD’s 2022 IRP. SMUD’s updated IRP plans for a greater than 92% reduction in GHG emissions by 2030 relative to 1990 levels, which equals approximately

250,000 metric tons of GHG emissions in 2030. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*.”

On April 29, 2015, the Governor of the State signed Executive Order B-30-15, establishing a goal for the State to reduce GHG emissions to 40% below 1990 levels by 2030. In 2016, the State Legislature passed Senate Bill 32 (“SB 32”), which codified then-Governor Brown’s goal of reducing the State’s GHG emissions to 40% below 1990 levels by 2030. In 2017, the State Legislature passed Assembly Bill 398 (“AB 398”), explicitly authorizing the continuation of the cap-and-trade program, with designated changes, through 2030. Subsequently, CARB adopted an initial set of regulatory changes extending the cap-and-trade program, including establishing utility sector allowance allocations through 2030. In 2018, CARB completed a rulemaking to implement the cap-and-trade program changes designated by AB 398. These changes include development of a hard price ceiling for the cap-and-trade program and two price-containment points below that ceiling, in an attempt to ensure stable prices in the program. CARB adopted final regulations on December 13, 2018.

In addition, any new projects constructed in the State, including power plants, that may cause a significant adverse impact on the environment must be analyzed under CEQA. Some State agencies have begun using CEQA in novel ways to require mitigation of “significant” GHG emissions caused, either directly or indirectly, by a project. Pursuant to Senate Bill 97 passed in 2007, CARB will assist the Governor’s Office of Planning and Research in setting thresholds of significance under CEQA of GHG impacts from new projects. This is an area of State law that is evolving and untested in the courts. However, there is a risk that any project proponent of an electric system infrastructure project might have to mitigate such potential impacts to a level of less than significant.

On December 3, 2012, the Superior Court issued a ruling in *Cleveland National Forest Foundation v. San Diego Association of Governments* (“SANDAG”), Case No. 2100-00101593, that sided with the State Attorney General and the other petitioners stating that SANDAG did not follow CEQA when it adopted a \$257 billion regional transportation plan in 2011. The ruling expressly invalidated the certification of the Environmental Impact Report (“EIR”) on the grounds that the EIR should have analyzed the plan’s consistency with the governor’s policy goal to reduce GHG emissions by 80% by 2050 as articulated in the 2005 Executive Order S-03-05. On November 24, 2014, the Fourth Appellate District upheld the trial court in a published decision, and SANDAG appealed to the State Supreme Court. On July 13, 2017, the Supreme Court reversed and held that SANDAG’s decision not to adopt the 2050 goal was not an abuse of discretion. Nevertheless, the Court articulated three clear principles for agencies to follow in their CEQA review of planning documents: 1) agencies must take seriously the significance of even small increases in GHG emissions; 2) they must consider science-based State policy guidance in their decision-making; and 3) they are required to use the best scientific information available to determine whether their planning decisions are consistent with the State’s goals. These principles will apply to SMUD in CEQA reviews of future projects.

On September 29, 2006, the Governor of the State signed into law Senate Bill 1368 (“SB 1368”), the GHG Emissions Performance Standard (“EPS”). SB 1368 limits long-term investments in baseload generation by the State’s utilities to power plants that meet an EPS jointly established by the CEC and the CPUC. The agencies have set the EPS at 1,100 pounds CO₂ per MWh, which is roughly half of the CO₂ emissions rate of a conventional coal-fired power plant. CEC regulations to implement the law for POUs were approved by the Office of Administrative Law on October 16, 2007.

SMUD’s primary supply and demand-side resources need to meet customers’ electricity usage patterns over the next 10 years. Currently there is a ban in the State that prohibits the development of nuclear power plants until there is a permanent storage solution for spent fuel rods. With the effective ban on new coal power imports under SB 1368, natural gas-fired, combined cycle power plants would appear

to be the primary viable option for fossil fuel-based baseload power plant development absent the implementation of new technologies in connection with other resource options. The reliance on a single fuel source will continue to put pressure on the natural gas market in the United States. SMUD has in place a natural gas procurement plan to mitigate natural gas volatility, see “POWER SUPPLY AND TRANSMISSION – Fuel Supply” above.

On September 16, 2022, the Governor of the State signed into law SB 1020, which creates interim climate targets under which eligible renewable energy resources and zero-carbon resources must supply 90% of all retail sales of electricity to California end-use customers by December 31, 2035, and 95% by December 31, 2040. The bill also requires each State agency to ensure that zero carbon resources and eligible renewable energy resources supply 100% of electricity procured on its behalf by December 31, 2035. SMUD provides electricity to a number of State agency buildings and will work with State agencies to comply with this requirement.

On October 7, 2023, the Governor of the State signed into law AB 1305, which requires an entity that purchases or uses voluntary carbon offsets and makes claims regarding the achievement of net zero, or other similar claims, to disclose on their website specified information. Many stakeholder groups are raising questions on if this includes RECs. Clean-up legislation could follow. It is not clear at this time whether RECs are included.

Reliability. On June 30, 2022, the Governor signed the 2022-23 budget, along with a number of trailer bills, which provide implementing details on the budget line items. Included in AB 205, the energy trailer bill, are a number of reliability programs.

1. CEC Distributed Electricity Backup Assets Program to incentivize the construction of cleaner and more efficient distributed energy assets that would serve as on-call emergency supply or load reduction for the state’s electrical grid during extreme events. The CEC adopted program guidelines in October 2023 and issued the first solicitation in December 2023.
2. CEC Demand Side Grid Support Program to pay customers to reduce demand during stressed grid events. SMUD has actively engaged the CEC on the development and subsequent revision of program guidelines. The CEC is expected to revise the guidelines again for summer 2024.
3. DWR Strategic Reliability Reserve to secure resources for summer reliability or to preserve the option to extend the life of facilities that otherwise would retire, new temporary generators of more than five MW, new energy storage systems of at least 20 MW, generation facilities that use clean, zero-emission fuel technologies, or new zero-emission technologies that can be operational by December 31, 2026.

As a follow up to this legislation, the Governor signed into law AB 1373. The bill authorizes the CEC to annually assess a capacity payment on a POU within the CAISO balancing authority area during a month in which the POU fails to meet its minimum planning reserve margin. This does not include SMUD, who is within the BANC balancing authority area. SMUD is, however, required to submit to the CEC an assessment of whether it exceeded, met, or failed to meet its minimum planning reserve margin and system resource adequacy requirements. This bill also allows the DWR, for certain types of long-development projects, to act as a central procurement entity. For POUs, participation in the DWR program would be optional.

Zero-Emission Fleet Mandates. CARB has adopted the Advanced Clean Fleets (“ACF”) regulation, requiring certain medium- and heavy-duty (“MHD”) vehicle fleets to transition to zero-emission vehicles through purchase requirements or fleet composition requirements, which took effect on November

1, 2023, and applies to all publicly owned MHD fleets, larger commercially owned MHD fleets, and drayage trucks. Under the ACF Rule, public fleets like SMUD have two compliance options. The first is a zero-emission vehicle (“ZEV”) purchase requirement, under which 50% of annual MHD vehicle purchases would need to be ZEVs starting January 1, 2024, and 100% of annual MHD vehicle purchases would need to be ZEVs starting January 1, 2027. The second is an optional ZEV milestone option, under which the composition of the MHD fleet would need to meet certain ZEV percentages starting in 2025, with the entire fleet transitioned no later than 2042. The individual milestones depend on the number and category of vehicles in the fleet. Public fleets may opt into the ZEV milestone option until January 1, 2030. In 2024, SMUD plans to comply with the purchase requirement option, meaning that 50% of the MHD vehicles SMUD purchases in 2024 will be ZEVs. SMUD plans to monitor ZEV market developments and currently expects to opt into the ZEV milestone option as more ZEVs become available. The ACF Rule also accelerates a manufacturer ZEV sales requirement to 100% of all MHD truck sales by the 2036 model year.

CARB proposed the Zero-Emission Forklift regulation in November 2023. The regulation would require forklift fleets to transition spark-ignited forklifts to zero-emission technology starting in 2026. The regulation would apply to SMUD, as a forklift operator. Since SMUD has a limited number for forklifts, this regulation is not expected to have a material effect on SMUD’s financial position, liquidity, or results of operation.

Transportation and Building Electrification. In recent years, the State has identified transportation and building electrification as key strategies to reduce greenhouse gas emissions and improve air quality, and is advancing policy to support or accelerate electrification. For example, in addition to the zero-emission fleet mandates and LCFS regulation discussed herein, CARB adopted the Advanced Clean Cars II and Advanced Clean Trucks regulations to require vehicle manufacturers to increase sales of zero-emission cars and trucks, respectively. The CEC’s Building Energy Efficiency Standards are increasingly encouraging the use of electric heat pumps in new homes and certain non-residential buildings across the state. The draft 2025 Energy Standards, which are expected to be proposed by April 2024 and adopted by August 2024, would establish prescriptive heat pump requirements for both space and water heating in new homes, and may require existing homes to install a heat pump when replacing an air conditioner. The 2025 Energy Standards, if approved, would take effect on January 1, 2025. In addition, the State has also provided funding for programs to encourage clean transportation and building electrification.

Increases in transportation and building electrification will result in increased customer usage of electricity.

Renewables Portfolio Standard. Senate Bill 100 was passed by the Legislature and approved by Governor Brown on September 10, 2018. Among other requirements, the bill sets a 50% RPS target for 2026 and sets compliance period targets at 44% by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. The bill also creates a statewide planning goal to meet all of the state’s retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045.

Sacramento-San Joaquin River Bay-Delta Processes. The Sacramento-San Joaquin River Delta is an expansive inland estuary, formed at the western edge of the California Central Valley by the confluence of the Sacramento and San Joaquin rivers (“Delta”). There are two substantial Delta planning processes with the potential to affect (1) energy available for SMUD’s purchase from the Central Valley Project (“CVP”) and (2) flows within the Upper American River watershed. These processes are called the Bay-Delta Water Quality Control Plan (“Bay-Delta Plan”) and the Delta Conveyance Project.

The Bay-Delta Water Quality Control Plan is updated periodically by the State Water Resources Control Board (“SWRCB”), the last time being in 2006. The current Bay-Delta Plan update process is being implemented in four phases. The first phase considered southern Delta water quality, with a

significant focus on San Joaquin River tributaries. Phase 2, which is initially being addressed by a document under development by SWRCB staff, will address Sacramento River tributaries and various flow related issues, including the critically important one of those tributaries' contribution to Delta outflow. Phase 3 will concern changes to water rights needed to implement Phase 2. A substantial change in Delta outflow requirements could have a major impact on the timing of hydroelectric energy generation by the CVP. SMUD has a long-term agreement with WAPA to purchase some of this power (see "POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – *Western Area Power Administration*"). On July 18, 2018, the SWRCB released an updated Framework document signaling its staff's intent to propose Delta outflow requirements of 45–65% unimpaired flows for the Sacramento River tributaries (which includes the American River, the upper portions of which are where the UARP sits), though the report will analyze requirements of 35–75%. If these criteria were implemented, they could cut CVP generation by 50 to 63%. Governor Newsom has urged the SWRCB, other agencies and affected parties to execute voluntary agreements (aka the "Healthy Rivers Agreements") to address species' needs and outflow requirements. Although the negotiations have been slow, it is expected they will eventually result in a reasonable compromise. However, in September 2023 the SWRB released a Staff Report/Substitute Environmental Document in Support of Potential Updates to the Bay-Delta Plan (the "Staff Report/Substitute Environmental Document") to justify the adoption of the unimpaired flow standard as set forth in the 2018 Framework document. Numerous public entities, including SMUD, filed comments stating that, among other things, the potential updates identified in the Staff Report/Substitute Environmental Document, if adopted, would violate the Porter-Cologne Water Quality Control Act and Article X, section 2 of the California Constitution, would not improve fish and wildlife, and would not reasonably protect all beneficial uses, including water supplies for millions of Californians and hydroelectric power generation that is essential to California's resilient energy grid. Moreover, the comments filed also stated that the Staff Report/Substitute Environmental Document does not comply with CEQA because, among other things, the analysis of the proposed inflow and habitat objectives' impacts on electrical peaking generation, and more generally electrical grid reliability, is not supported by substantial evidence and fails to satisfy informational requirements. In addition, the comments maintain that the Healthy Rivers Agreements are a superior approach to achieving the goal of maximizing both environmental and other beneficial uses. If the unimpaired flow standard is adopted and the Healthy Rivers Agreements do not come to fruition, SMUD plans to fully participate in all regulatory and legal proceedings to argue for consideration and minimization of impacts to hydropower generation. SMUD will assess the potential impacts of proposed modifications to the present outflow objectives on SMUD's operations once, or if, the SWRCB makes available information with enough specificity for SMUD to conduct the relevant modeling.

In July 2022, the DWR released a Draft Environmental Impact Report ("EIR") to evaluate the potential impacts of carrying out the Delta Conveyance Project; the U.S. Army Corps of Engineers released a separate Environmental Impact Statement to evaluate the effects of the project pursuant to the National Environmental Policy Act. The Delta Conveyance Project is expected to entail construction of two intakes on the Sacramento River that will carry water to a main tunnel to the California Aqueduct for delivery south of the Delta. The Delta Conveyance Project may pose the potential to exacerbate impacts to already imperiled aquatic species, and in turn could have indirectly prompted regulatory agencies to require third parties, such as SMUD, to compensate by making changes to their operations. The Bureau of Reclamation is not a party to the Delta Conveyance Project, which should eliminate the potential for CVP power to be used to supply Delta Conveyance Project pumps. SMUD will monitor the proceedings and participate as necessary to ensure any impacts to SMUD interests are minimized, including potentially filing a challenge to the water rights DWR would need to modify in order to carry out the project.

Proposition 26. Proposition 26 was approved by the electorate on November 2, 2010 and amends Article XIII A and Article XIII C of the State Constitution. Proposition 26 imposes a two-thirds voter approval requirement for the imposition of fees and charges by the State, unless the fees and charges are expressly excluded. It also imposes a majority voter approval requirement on local governments with

respect to fees and charges for general purposes, and a two-thirds voter approval requirement with respect to fees and charges for special purposes, unless the fees and charges are expressly excluded. The initiative, according to its supporters, is intended to prevent the circumvention of tax limitations imposed by the voters pursuant to Proposition 13, approved in 1978, and other measures through the use of non-tax fees and charges. Proposition 26 expressly excludes from its scope a charge imposed for a specific local government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable cost to the local government of providing the service or product. Proposition 26 is not retroactive as applied to local governments. Although SMUD believes that the initiative was not intended to apply to fees for utility services such as those charged by SMUD and its fees and charges meet the criteria of the exclusion described above, it is possible that Proposition 26 could be interpreted to further limit fees and charges for electric utility services and/or require stricter standards for the allocation of costs among customer classes. SMUD is unable to predict at this time how Proposition 26 will be interpreted by the courts or what its ultimate impact will be. As of the date of this Official Statement, SMUD is unaware of any fees or charges relating to SMUD's service that would have to be reduced or eliminated because of Proposition 26. However, certain of SMUD's adopted rate increases have been challenged. See "LEGAL PROCEEDINGS – Proposition 26 Lawsuit."

Initiative 1935. A voter initiative entitled "The Taxpayer Protection and Government Accountability Act" ("Initiative 1935") has been determined to be eligible for the State's November 2024 statewide general election and, unless withdrawn by its proponent prior to June 27, 2024, will be certified as qualified for the ballot in such election. Were it to be approved by a majority of voters in the election, Initiative 1935 would amend Article XIII C of the State Constitution to, among other things, provide that charges (or increases in charges) imposed or extended by a local government after January 1, 2022 for services or products provided directly to the payor (including, potentially, fees and charges for electric utility services) are "taxes" subject to voter approval unless the local government can prove by clear and convincing evidence that the charge is reasonable and does not exceed the "actual cost" of providing the service or product. Initiative 1935 defines "actual cost" as "(i) the minimum amount necessary to reimburse the government for the cost of providing the service or the product to the payor and (ii) where the amount charged is not used by the government for any purpose other than reimbursing that cost." Initiative 1935 would also require that local governments impose fees and charges by ordinance (which may be subject to referendum). If adopted, Initiative 1935 would be subject to judicial interpretation. SMUD is unable to predict whether and how Initiative 1935, if approved, would be interpreted or applied, but it is possible any such interpretation or application could further limit future fees and charges or future increases in fees and charges for electric utility services, require stricter standards for the allocation of costs among customer classes and/or otherwise adversely impact SMUD and its revenues. In response to an emergency petition filed by Governor Gavin Newsom, with support from the League of California Cities and others, the California Supreme Court has unanimously agreed to decide whether the initiative should appear on the November 2024 ballot or be disqualified. A ruling is expected before June 30, 2024, which is the deadline for placing items on the November 2024 ballot.

On November 2, 2023, Assembly Constitutional Amendment No. 13 ("ACA 13") was filed with the Secretary of State and will be on the ballot for the November 2024 statewide general election. If approved by voters, ACA 13 would require any initiative constitutional amendment appearing on the ballot on or after January 1, 2024, that would increase the voter approval requirement to adopt any State or local measure to be approved by the highest voter approval requirement that the initiative measure would impose. In other words, if ACA 13 is approved by voters, its express terms appear to require Initiative 1935 to pass with a 2/3 vote, since Initiative 1935 would extend a 2/3 vote requirement to additional State and local fees and charges. If adopted, ACA 13 and its effect on the adoption of Initiative 1935, if applicable, are likely to be subject to judicial interpretation. SMUD is not able to predict whether or how ACA 13, if approved, would be interpreted or applied or whether or how ACA 13, if approved, would affect the adoption, interpretation or application of Initiative 1935, if adopted.

Wildfire Legislation. In response to catastrophic wildfires in California, legislation was adopted and signed into law requiring POU's (including SMUD), IOUs, and electrical cooperatives to construct, maintain and operate their electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by electrical lines and equipment. Senate Bill 247 ("SB 247"), signed by Governor Newsom on October 2, 2019, establishes notification, audit and reporting guidelines for electrical corporations relating to vegetation management requirements in the wildfire mitigation plan. SB 247 also specifies the qualifications for electrical line clearance tree trimmers performing work to comply with the vegetation management requirements in an electrical corporation's wildfire mitigation plan and requires that qualified line clearance tree trimmers be paid no less than a specified prevailing wage rate. POU's are not required to adhere to SB 247, but the market impacts are projected to significantly increase SMUD's annual vegetation management costs.

Nonstock Security. SMUD sponsored legislation in 2019, Assembly Bill 689, which was signed into law by Governor Newsom on September 5, 2019. This bill expressly allows SMUD the ability to operate a pilot project (effective January 1, 2020, to January 1, 2025), of up to three acquisitions, to hold nonstock security in a corporation or other private entity if acquired as part of a procurement of goods or services from that entity, provided that no separate funding is expended solely for the nonstock security. This will allow SMUD to realize the financial benefits of its investments, partnerships, and intellectual property.

On September 15, 2022, the Board authorized the CEO & GM to enter into a joint collaboration agreement with ESS Tech, Inc. ("ESS"). Under that agreement SMUD would procure from ESS iron flow batteries for utility scale long-duration energy storage applications. The agreement contemplates a multi-year phased deployment of up to 200MW/2GWh of long duration energy storage by 2028. As part of that procurement, SMUD acquired nonstock security in ESS.

SMUD will be sponsoring legislation in 2024 to extend the authority granted by Assembly Bill 689 to future years.

Future Regulation

The electric industry is subject to continuing legislative and administrative reform. States and Federal entities routinely consider changes to the way in which they regulate the electric industry. Recently, both further deregulation and forms of additional regulation have been proposed for the industry, which has been highly regulated throughout its history. SMUD is unable to predict at this time the impact any such proposals will have on the operations and finances of SMUD or the electric utility industry generally.

OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY

CAISO Market Initiatives

The CAISO routinely conducts a number of initiatives and stakeholder processes that propose certain operational and market changes that impact SMUD. SMUD does and will continue to monitor the various initiatives proposed by the CAISO and participate in its stakeholder processes to ensure that its interests are protected.

SMUD participates in the CAISO market for only a small percentage of energy needs, however, it continues to benefit from its participation in the CAISO's WEIM and is currently exploring further participation in the CAISO's proposed Extended Day Ahead Market ("EDAM") (both the WEIM and EDAM are described further below). Along with monitoring other key market initiatives at the CAISO which impact wholesale energy markets, SMUD will continue to actively participate in all processes related

to EIM and EDAM, to ensure both participation models are beneficial to SMUD’s customers. Given its success in EIM and active engagement with the CAISO and CAISO leadership, SMUD has earned a key role in the stakeholder processes related to these important and evolving markets.

Resource Adequacy Filing

In September 2005, the State Legislature enacted and the Governor signed into law Assembly Bill 380 (“AB 380”), which requires the CPUC to establish resource adequacy requirements for all LSEs within the CPUC’s jurisdiction. SMUD is not an LSE subject to the CPUC’s jurisdiction. In 2005, the CPUC issued a decision requiring jurisdictional LSEs to demonstrate that they have acquired capacity sufficient to serve their forecast retail customer load plus a minimum 15% planning reserve margin. In June 2022, the CPUC issued a decision increasing the minimum planning reserve margin to 16% for 2023 and 17% for 2024. In June 2023, the CPUC kept the minimum planning reserve margin at 17% for 2024 and extended the 17% requirement for 2025.

AB 380 also required publicly owned utilities, including SMUD, to meet the most recent resource adequacy standard as adopted by the WECC. The WECC has yet to formally adopt a resource adequacy requirement. However, consistent with current WECC practices, SMUD utilizes a minimum 15% planning reserve margin when assessing the need for future resources. For summer 2023, SMUD attained a 17% planning reserve margin and will have at least a 17% planning reserve margin for summer 2024 as well.

In 2022, the State Legislature adopted Assembly Bill 209 (2022) (“AB 209”), which requires the CEC to develop recommendations about approaches to determining an appropriate planning reserve margin for local publicly owned utilities within the CAISO balancing authority area. The CEC has initiated a proceeding and plans to publish a report with a recommended methodology in summer 2024. The report will not directly impact SMUD since SMUD is not in the CAISO; nevertheless, SMUD is monitoring the proceeding. The State Legislature also passed Assembly Bill 1373 (2023) (“AB 1373”) that requires the CEC to submit a report to the Legislature that assesses whether each local publicly owned electric utility in California (both inside and outside the CAISO) exceeded, met, or failed to meet its minimum planning reserve margin for 2023. The report must also assess whether local publicly owned utilities met the planning reserve margin for June through September 2023 established by the CPUC’s June 2022 decision (i.e., 16%). See also “DEVELOPMENTS IN THE ENERGY SECTOR – State Legislation and Regulatory Proceedings – *Reliability*.”

While SMUD believes the CEC’s report will show SMUD met both its 15% planning reserve margin and the CPUC’s 16% planning reserve margin for 2023, SMUD is unable to predict the outcome of the report, or what the Legislature intends to do with the report. To the extent the CEC or Legislature imposes a higher POU planning reserve margin for future years that includes SMUD, the ultimate impacts on SMUD’s financial results and operations are difficult to predict and are dependent on a variety of factors, such as the relative cost of procuring energy/capacity, the availability and relative cost of new technologies, and the adoption and implementation of energy efficiency and other measures by SMUD’s customers; however, such impacts could be material.

Western Energy Imbalance Market and Extended Day Ahead Market

Federal and state policymakers have long-promoted the development of organized markets in the west as a means (among other reasons) to better integrate intermittent renewable resources into the electric system, the first of which markets is the Western EIM, operated by the CAISO. The CAISO successfully launched the WEIM, a real time only imbalance market, on October 1, 2014, with PacifiCorp as the first participant. Since this time, the WEIM has grown significantly with the addition of 21 other Balancing

Authority Areas (including BANC) which together comprise roughly 80% of the load in the Western Interconnection.

To date, participation in the WEIM by SMUD has shown significant financial and operational benefits, in addition to furthering an already favorable working partnership between SMUD and the CAISO to develop solutions to integrate renewable resources in support of carbon reduction goals.

BANC's participation not only signaled the first public power participant in the EIM, but it was also implemented utilizing a unique phased approach, with SMUD (as the largest member of BANC) implementing so-called WEIM Phase 1 in 2019, while the other BANC members and WAPA (the "Phase 2 Parties") joined after further evaluation and approvals in March of 2021.

Part of the BANC Phase 2 participation included reimbursement to SMUD certain upfront infrastructure costs incurred by SMUD in Phase 1 to establish BANC as an WEIM Entity. This reimbursement to SMUD by the Phase 2 Parties has been completed.

The CAISO and WEIM participants, including SMUD and BANC, have participated in developing a design framework to extend the successful WEIM real time framework to the EDAM. Like WEIM, EDAM would broaden the access to regional resources for the reliable integration of renewable resources, only over a longer (day ahead) time horizon by allowing for a more economic and efficient optimization of regional resources by providing grid operators greater time (day ahead as opposed to real time) to commit or decommit units based on market price signals. Only participants in the WEIM will be allowed to extend their participation to EDAM. The CAISO launched a public stakeholder initiative and utilized most of 2022 developing the EDAM design. On February 1, 2023 the CAISO Board of Governors and EIM Governing Body approved the EDAM proposal, with the CAISO filing tariff amendments with FERC on August 22, 2023. FERC unanimously approved most of the filing on December 20, 2023, rejecting without prejudice just one element of the EDAM proposal related to transmission revenue recovery for market participants. The CAISO will work with first movers, PacifiCorp and BANC, and stakeholders in 2024 to refine transmission revenue recovery based on FERC's guidance and begin implementation activities, with the market expected to go-live in the first quarter of 2026. Similar to the process around WEIM participation, SMUD, along with BANC, performed cost-benefit studies that demonstrated EDAM participation will expand on the existing WEIM benefits and in August 2023, SMUD and BANC both approved participation in EDAM with an expectation to on-board in time for the first phase of EDAM participation in 2026.

Other Factors

The electric utility industry in general has been, or in the future may be, affected by a number of other factors which could impact the financial condition and competitiveness of many electric utilities and the level of utilization of generating and transmission facilities. In addition to the factors discussed above, such factors include, among others, (a) effects of compliance with rapidly changing environmental, safety, licensing, regulatory and legislative requirements other than those described above; (b) changes resulting from conservation and demand side management programs on the timing and use of electric energy; (c) changes resulting from a national energy policy; (d) effects of competition from other electric utilities (including increased competition resulting from mergers, acquisitions, and "strategic alliances" of competing electric and natural gas utilities and from competitors transmitting less expensive electricity from much greater distances over an interconnected system) and new methods of, and new facilities for, producing low cost electricity; (e) the repeal of certain federal statutes that would have the effect of increasing the competitiveness of many IOUs; (f) increased competition from independent power producers and marketers, brokers and federal power marketing agencies; (g) "self-generation" or "distributed generation" (such as solar, microturbines and fuel cells) by industrial and commercial customers and others; (h) issues relating to the ability to issue tax exempt obligations, including severe restrictions on the ability

to sell to nongovernmental entities electricity from generation projects and transmission service from transmission line projects financed with tax exempt obligations; (i) effects of inflation on the operating and maintenance costs of an electric utility and its facilities; (j) changes from projected future load requirements; (k) increases in costs and uncertain availability of capital; (l) issues relating to supply chains and the uncertain availability or increased costs of necessary materials; (m) shifts in the availability and relative costs of different fuels (including the cost of natural gas); (n) sudden and dramatic increases in the price of energy purchased on the open market that may occur in times of high peak demand in an area of the country experiencing such high peak demand, such as has occurred in the State; (o) issues relating to risk management procedures and practices with respect to, among other things, the purchase and sale of natural gas, energy and transmission capacity; (p) other legislative changes, voter initiatives, referenda and statewide propositions; (q) effects of changes in the economy; (r) effects of possible manipulation of the electric markets; (s) natural disasters or other physical calamities, including, but not limited to, earthquakes, droughts, severe weather, wildfires and floods; (t) changes to the climate, including increasing volatility in rainfall in the Western United States and a reduction in the depth and duration of the Sierra snowpack; (u) issues relating to cyber-security; and (v) outbreaks of infectious diseases or the occurrence of pandemics. Any of these factors (as well as other factors) could have an adverse effect on the financial condition of any given electric utility, including SMUD's electric utility, and likely will affect individual utilities in different ways.

SMUD is unable to predict what impact such factors will have on the business operations and financial condition of SMUD's electric system, but the impact could be significant. SMUD has taken major steps to mitigate the impacts of many of the changes. This Official Statement includes a brief discussion of certain of these factors. This discussion does not purport to be comprehensive or definitive, and these matters are subject to change subsequent to the date hereof. Extensive information on the electric utility industry is available from the legislative and regulatory bodies and other sources in the public domain, and potential purchasers of any of SMUD's Senior Bonds or Subordinated Bonds described in the forepart of this Official Statement should obtain and review such information.

APPENDIX C

DEFINITIONS OF CERTAIN TERMS

APPENDIX D

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

APPENDIX E

**FORM OF CONTINUING DISCLOSURE AGREEMENT
FOR THE PURPOSE OF PROVIDING
CONTINUING DISCLOSURE INFORMATION
UNDER SECTION (b)(5) OF RULE 15c2-12**

APPENDIX F

PROPOSED FORM OF OPINION OF BOND COUNSEL

[Closing Date]

Northern California Energy Authority
Sacramento, California

Northern California Energy Authority
Commodity Supply Revenue Refunding Bonds, Series 2024

Ladies and Gentlemen:

We have acted as bond counsel to the Northern California Energy Authority (the “Issuer”) in connection with issuance of \$ _____ aggregate principal amount of Northern California Energy Authority Commodity Supply Revenue Refunding Bonds, Series 2024 (the “Bonds”), issued pursuant to an amended and restated trust indenture, dated as of _____ 1, 2024 (the “Trust Indenture”), between the Issuer and Computershare Trust Company, N.A. (as successor to Wells Fargo Bank, National Association), as trustee (the “Trustee”). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Trust Indenture.

In such connection, we have reviewed the Trust Indenture; the Commodity Purchase Agreement; the Commodity Supply Contract; the ISDA Master Agreement dated as of December 10, 2018, the Amended & Restated Schedule, dated as of _____, 2024, and the Amended and Restated Confirmation thereto, dated _____, 2024 (collectively, the “Issuer Commodity Swap”), each between the Issuer and Royal Bank of Canada (the “Commodity Swap Counterparty”); the ISDA Master Agreement dated as of December 10, 2018, the Amended & Restated Schedule, dated as of _____, 2024, the Amended & Restated Credit Support Annex, dated as of _____, 2024, and the Amended & Restated Confirmation thereto, dated _____, 2024 (collectively, the “Supplier Commodity Swap”), each between the Commodity Supplier and the Commodity Swap Counterparty; the Tax Certificate and Agreement, dated the date hereof (the “Tax Certificate”), between the Issuer and the Sacramento Municipal Utility District (“SMUD”); opinions of counsel to the Issuer, the Trustee and SMUD; certificates of the Issuer, the Trustee, SMUD and others; and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after the date hereof. Accordingly, this letter speaks only as of its date and is not intended to, and may not, be relied upon or otherwise used in connection with any such actions, events or matters. Our engagement with respect to the Bonds has concluded with their issuance, and we disclaim any obligation to update this letter. We have assumed the genuineness of all documents and signatures presented to us (whether as originals or as copies) and the due and legal execution and delivery thereof by, and validity against, any parties other than the Issuer. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all covenants and agreements contained in the Trust Indenture, the Commodity Purchase Agreement, the Commodity Supply Contract, the Issuer Commodity Swap, the Supplier Commodity Swap and the Tax Certificate, including (without limitation) covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the Bonds to be included in gross income for federal income tax

purposes. We call attention to the fact that the rights and obligations under the Bonds, the Trust Indenture, the Commodity Purchase Agreement, the Commodity Supply Contract, the Issuer Commodity Swap, the Supplier Commodity Swap and the Tax Certificate and their enforceability may be subject to bankruptcy, insolvency, receivership, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against joint powers authorities and municipal utility districts in the State of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinion with respect to the state or quality of title to or interest in any of the assets described in or as subject to the lien of the Trust Indenture or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such assets. Our services did not include financial or other non-legal advice. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement or other offering material relating to the Bonds and express no opinion with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The Bonds constitute the valid and binding limited obligations of the Issuer.
2. The Trust Indenture has been duly executed and delivered by, and constitutes the valid and binding obligation of, the Issuer. The Trust Indenture creates the valid pledge which it purports to create of the revenues, moneys, securities and funds comprising the Trust Estate pledged under the Trust Indenture, subject only to the provisions of the Trust Indenture permitting the application thereof for the purposes and on the terms and conditions set forth in the Trust Indenture.
3. Interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. Interest on the Bonds is not a specific preference item for purposes of the federal alternative minimum tax. We observe that interest on the Bonds included in adjusted financial statement income of certain corporations is not excluded from the federal corporate alternative minimum tax. We express no opinion regarding other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Bonds.

Faithfully yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

APPENDIX G

BOOK-ENTRY SYSTEM

The Depository Trust Company (“DTC”), New York, New York, will act as securities depository for the Bonds. The Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered bond certificate will be issued for each maturity of the Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC. If, however, the aggregate principal amount of any maturity of the Bonds exceeds \$500 million, one certificate will be issued with respect to each \$500 million of principal amount and an additional certificate will be issued with respect to any remaining principal amount of such maturity.

DTC, the world’s largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“*Direct Participants*”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly owned subsidiary of The Depository Trust & Clearing Corporation (“*DTCC*”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“*Indirect Participants*”). DTC has a Standard & Poor’s rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com

Purchases of Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC’s records. The ownership interest of each actual purchaser of each Bond (“*Beneficial Owner*”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized

representative of DTC. The deposit of Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership.

DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Bonds may wish to take certain steps to augment transmission to them of notices of significant events with respect to the Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Bond documents. For example, Beneficial Owners of Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Bonds within a maturity of the Bonds are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the issuer of securities as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts such Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds and payments of principal and interest on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from NCEA or the Trustee on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, NCEA or the Trustee, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds and principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of NCEA or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Bonds at any time by giving reasonable notice to NCEA or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, Bond certificates are required to be printed and delivered.

NCEA may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Bond certificates are required to be printed and delivered to DTC.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that NCEA believes to be reliable, but NCEA takes no responsibility for the accuracy thereof.

APPENDIX J

THE FUNDING RECIPIENT

DRAFT BOND PURCHASE CONTRACT

NORTHERN CALIFORNIA ENERGY AUTHORITY
\$000,000,000
COMMODITY SUPPLY REVENUE REFUNDING BONDS
SERIES 2024

BOND PURCHASE CONTRACT

[Pricing Date], 2024

Northern California Energy Authority
6201 S. Street
Sacramento, California

To Whom It May Concern:

The undersigned, Goldman Sachs & Co. LLC (the “*Underwriter*”), offers to enter into this Bond Purchase Contract (the “*Purchase Contract*”) with Northern California Energy Authority (the “*Issuer*”) which, upon the Issuer’s acceptance of this offer, will be binding upon the Issuer and upon the Underwriter. This offer is made subject to the Issuer’s written acceptance hereof on or before 11:59 p.m., local time in New York, New York, on the date written above, and, if not so accepted, will be subject to withdrawal by the Underwriter upon notice delivered to the Issuer at any time prior to the acceptance hereof by the Issuer.

Capitalized terms used and not defined herein shall have the respective meanings ascribed thereto in the Official Statement (defined below).

SECTION 1. PURCHASE AND SALE.

(a) Upon and subject to the terms and conditions and upon the basis of the representations, warranties and agreements set forth herein, the Underwriter hereby agrees to purchase from the Issuer, and the Issuer hereby agrees to sell and deliver for the account of the Underwriter, \$000,000,000 aggregate principal amount of the Issuer’s Commodity Supply Revenue Refunding Bonds, Series 2024 (the “*Bonds*”), bearing interest at Fixed Rates and in a Fixed Rate Period during the Interest Rate Reset Period. The Bonds shall be dated as of the date of their original issuance and delivery, and shall have the maturities and shall bear interest for the Interest Rate Reset Period at the rates shown on *Schedule I* hereto, and shall be subject to redemption and mandatory tender for purchase as provided in the Indenture and described in the Official Statement.

(b) The aggregate purchase price for the Bonds shall be \$_____ (representing the principal amount of the Bonds, plus original issue premium of \$_____, less Underwriter’s discount of \$_____). Payment of the purchase price for and delivery of the Bonds shall be made as provided in Section 7 hereof (such payment and delivery and the other actions

contemplated hereby to take place at the time of such payment and delivery being herein sometimes called the “*Closing*”).

(c) It shall be a condition to the Issuer’s obligation to sell and to deliver the Bonds to the Underwriter that the entire \$000,000,000 principal amount of the Bonds shall be purchased, accepted and paid for by the Underwriter at the Closing. It shall be a condition to the Underwriter’s obligation to purchase, to accept delivery of and to pay for the Bonds, that the entire \$000,000,000 principal amount of the Bonds shall be issued, sold and delivered by the Issuer at the Closing.

SECTION 2. OFFICIAL STATEMENT; COMPLIANCE WITH RULE 15C2-12.

(a) The Issuer hereby confirms that it has “deemed final” as of its date the Preliminary Official Statement, dated _____, 2024, relating to the Bonds (the “*Preliminary Official Statement*”) for purposes of paragraph (b)(1) of Rule 15c2-12 (“*Rule 15c2-12*”) promulgated by the Securities and Exchange Commission (the “*SEC*”) under the Securities Exchange Act of 1934, as amended, except for the omission of only such material as is permitted by such paragraph.

(b) Within seven business days after the execution of this Purchase Contract (but in any event not less than two business days prior to the date of Closing), the Issuer shall prepare and deliver to the Underwriter a final Official Statement of the Issuer relating to the Bonds executed by the Issuer as indicated thereon, such Official Statement to be in the substantially the same form as the Preliminary Official Statement with such changes as shall be necessary to complete such form and such other changes as may be approved by the Underwriter (such document, including the cover page, inside front cover and Appendices attached thereto, is referred to herein as the “*Official Statement*”). The Issuer shall, as soon as practicable, but not later than _____, 2024, deliver to the Underwriter as many printed, conformed copies of the Official Statement as the Underwriter shall advise the Issuer are necessary to permit the Underwriter to comply with the requirements of Rule 15c2-12 and the rules of the Municipal Securities Rulemaking Board (the “*MSRB*”). In addition, the Issuer will provide, subject to customary disclaimers regarding the transmission of electronic copies, an electronic copy of the final Official Statement to the Underwriter in the currently required designated electronic format stated in MSRB Rule G-32 and the EMMA Dataport Manual (as defined below). The format in which the Preliminary Official Statement was delivered meets such electronic format requirements.

Within one (1) business day after receipt of the Official Statement from the Issuer, but by no later than the date of Closing, the Underwriter shall, at its own expense, submit the Official Statement to EMMA (as defined below). The Underwriter shall comply with the provisions of MSRB Rule G-32, including without limitation the submission of Form G-32 and the Official Statement, and notify the Issuer of the date on which the Official Statement has been filed with EMMA.

“*EMMA*” means the MSRB’s Electronic Municipal Market Access system, or any other electronic municipal securities information access system designated by the MSRB for collecting and disseminating primary offering documents and information.

“EMMA Dataport Manual” means the document(s) designated as such and published by the MSRB from time to time setting forth the processes and procedures with respect to submissions to be made to the primary market disclosure service of EMMA by underwriters under Rule G-32(b).

(c) Each party hereto agrees that it will notify the other parties hereto if, within the period from the date of this Purchase Contract to and including the date which is 25 days following the End of the Underwriting Period (defined below), such party discovers any pre-existing or subsequent fact or becomes aware of the occurrence of any event, in any such case, which might cause the Official Statement (as the same may have been supplemented or amended) to contain any untrue statement of a material fact or to omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. If, in the reasonable judgment of the Underwriter, the preparation and publication of a supplement or amendment to the Official Statement is, as a result of such fact or event (or any other event which becomes known to the Issuer or the Underwriter during such period), necessary so that the Official Statement does not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, the Issuer will, at its expense, supplement or amend the Official Statement in such a manner so that the Official Statement, as so supplemented or amended, does not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, and furnish a sufficient number of copies of such supplement or amendment to the Underwriter as is required for the Underwriter to comply with its obligations imposed by the SEC and the MSRB. The Issuer and the Underwriter agree that they will cooperate in the preparation of any such amendment or supplement. The Issuer agrees that it will not prepare, publish or distribute any supplement or amendment to the Official Statement without the consent of the Underwriter.

(d) For purposes of this Purchase Contract, the “End of the Underwriting Period” shall mean the Closing Date (defined below), or, if the Issuer has been notified in writing by the Underwriter, on or prior to the Closing Date, that the “End of the Underwriting Period” within the meaning of Rule 15c2-12 will not occur on the Closing Date, such later day on which the “End of the Underwriting Period” within such meaning has in fact occurred. If the Issuer has been given notice pursuant to the preceding sentence that the “End of the Underwriting Period” will not occur on the Closing Date, the Underwriter agrees to notify the Issuer in writing of the day it does occur as soon as practicable following the “End of the Underwriting Period” for all purposes of Rule 15c2-12; *provided, however*, that if the Underwriter has not otherwise so notified the Issuer of the “End of the Underwriting Period” by the 180th day after the Closing Date, then the “End of the Underwriting Period” shall be deemed to occur on such 180th day after the Closing Date, unless otherwise agreed to by the Issuer.

(e) At any time prior to the End of the Underwriting Period, the Underwriter may from time to time request, and, if such request is made, the Issuer shall deliver to the Underwriter as soon as practicable thereafter, a certificate of the Issuer signed by an Authorized Officer in the form set forth as *Exhibit E* hereto, dated a date (and speaking as of such date) not earlier than the

date of such request. For purposes of this paragraph (e), an “Authorized Officer” shall include any of the following: the President or Vice President of the Commission of the Issuer, the Executive Director, Chief Financial Officer, Treasurer or Secretary of the Issuer and any other person or persons designated by the Commission by resolution to act on behalf of the Issuer.

(f) In connection with any amendments or supplements to the Official Statement that are made pursuant to Section 2(c) hereof, the Underwriter may request and the Issuer hereby agrees that it will provide such additional certificates and opinions of counsel as the Underwriter shall reasonably deem necessary to evidence the accuracy and completeness of the Official Statement, as so amended or supplemented.

(g) To enable the Underwriter to comply with the requirements of paragraph (b)(5) of Rule 15c2-12 in connection with the offering of the Bonds, the Issuer and Sacramento Municipal Utility District (“SMUD”) will, on or prior to the date of the Closing (the “Closing Date”), execute and deliver a Continuing Disclosure Agreement in substantially the form set forth in APPENDIX E to the Official Statement (the “Continuing Disclosure Agreement”).

SECTION 3. THE BONDS AND THE INDENTURE.

The Bonds shall be issued and secured under, shall have the terms and provisions described in, and shall be payable as provided in, the Amended and Restated Trust Indenture, dated as of [] 1, 2024 (the “Indenture”), to be entered into between the Issuer and Computershare Trust Company, N.A., successor to Wells Fargo Bank, National Association, as trustee (the “Trustee”), in substantially the form thereof heretofore provided to the Underwriter. The Bonds are being issued to finance the Cost of Acquisition of the Commodity Project (as such terms are defined in the Indenture).

SECTION 4. OFFERING.

The Underwriter agrees to make a public offering of all of the Bonds at not in excess of the initial public offering prices or less than the yields set forth on the inside front cover of the Official Statement. The Underwriter shall notify the Issuer of any change in the initial offering prices.

SECTION 5. USE OF DOCUMENTS.

The Issuer hereby ratifies the use by the Underwriter of the Preliminary Official Statement (in printed or electronic form) and authorizes the use by the Underwriter of the Official Statement (including any supplements or amendments thereto) (in printed or electronic form) and the Issuer Documents (defined below), and the information therein contained, in connection with the public offering and sale of the Bonds.

SECTION 6. REPRESENTATIONS, WARRANTIES AND AGREEMENTS.

The Issuer hereby represents, warrants and agrees as follows:

(a) the Issuer is a joint powers authority and public entity of the State of California, organized and existing pursuant to the provisions of the Joint Exercise of Powers Act, constituting Chapter 5 of Division 7 of Title 1 (commencing with Section 6500) of the California Government Code, as amended and supplemented (the “*Act*”), and a joint powers agreement, dated November 8, 2018 (the “*JPA Agreement*”), entered into between the Sacramento Municipal Utility District (“*SMUD*”) and the Sacramento Municipal District Financing Authority;

(b) the Issuer has full legal right, power and authority (i) to enter into and perform its obligations under (A) this Purchase Contract, (B) the Indenture, (C) the NCEA Commodity Swap, (D) the NCEA Custodial Agreement, (E) the Commodity Purchase Agreement, (F) the Commodity Supply Contract, (G) the Collateral Agency Agreement, (H) the Re-Pricing Agreement, (I) the Continuing Disclosure Agreement, (J) the Escrow Agreement and (K) the SPE Master Custodial Agreement (collectively, the “*Issuer Documents*”), (ii) to adopt the resolution adopted by it on March 21, 2024, authorizing, among other things, the issuance of the Bonds and the execution and delivery by it of the Official Statement and the Issuer Documents (the “*Resolution*”), (iii) to sell, issue and deliver the Bonds to the Underwriter as provided herein, and (iv) to carry out and consummate the transactions contemplated by the Resolution, the Issuer Documents and the Official Statement; and the Issuer has materially complied, and will at the Closing be in material compliance in all respects, with the terms of the Act, and with the obligations in connection with the issuance of the Bonds on its part contained or to be contained in the Resolution, the Issuer Documents, and the Bonds;

(c) by all necessary official action, the Issuer has duly adopted the Resolution, has duly authorized and approved the Preliminary Official Statement and the Official Statement and the delivery to and use of each thereof by the Underwriter, has deemed the Preliminary Official Statement final for purposes of Rule 15c2-12, and has duly authorized and approved the execution and delivery of, and the performance by the Issuer of the obligations in connection with the issuance of the Bonds on its part contained in, the Resolution, the Bonds, the Issuer Documents, and the consummation by it of all other transactions contemplated by the Resolution, the Bonds and the Issuer Documents; the Issuer Documents constitute the legal, valid and binding obligations of the Issuer (upon their execution and delivery), enforceable in accordance with their respective terms, subject to applicable bankruptcy, insolvency, moratorium, reorganization and similar laws affecting creditors’ rights generally and subject, as to enforceability, to general principles of equity (regardless of whether enforcement is sought in a proceeding in equity or at law), judicial discretion and limitations on legal remedies against public entities in the State of California (the “*State*”); and the Bonds, when issued, authenticated and delivered for the account of the Underwriter in accordance with the Indenture and this Purchase Contract, will constitute legal, valid and binding obligations of the Issuer that are entitled to the benefits and security of the Indenture and are enforceable in accordance with their terms,

subject to applicable bankruptcy, insolvency, moratorium, reorganization and similar laws affecting creditors' rights generally and subject, as to enforceability, to general principles of equity (regardless of whether enforcement is sought in a proceeding in equity or at law), judicial discretion and limitations on legal remedies against public entities in the State;

(d) the Issuer is not in material breach of or default under any existing applicable constitutional provision, law or administrative regulation of the State or the United States or any applicable judgment or decree or any loan agreement, indenture, bond, note, resolution, agreement or other instrument to which the Issuer is a party or to which the Issuer or any of its property or assets is otherwise subject, and no event has occurred and is continuing which, with the passage of time or the giving of notice, or both, would (unless cured or waived) constitute a material default or event of default under any such instrument, in each case, which, in any material way, directly or indirectly, affects the issuance of the Bonds, or validity of the Bonds or the Issuer Documents, the validity or adoption of the Resolution or the execution and delivery of the Bonds or the Issuer Documents; and the adoption of the Resolution and the execution and delivery of the Bonds and the Issuer Documents, and compliance with the provisions on the Issuer's part contained therein, will not conflict with or constitute a material breach of or default under any existing applicable constitutional provision, law, administrative regulation, judgment, decree, loan agreement, indenture, bond, note, resolution, agreement or other instrument to which the Issuer is a party or to which the Issuer or any of its property or assets is otherwise subject which, in any material way, directly or indirectly, affects the issuance of the Bonds, or validity of the Bonds or the Issuer Documents, the validity or adoption of the Resolution or the execution and delivery of the Bonds or the Issuer Documents, nor will any such adoption, execution, delivery or compliance result in the creation or imposition of any lien, charge or other security interest or encumbrance of any nature whatsoever upon any of the property or assets of the Issuer or under the terms of any such law, regulation or instrument, except as contemplated by the Issuer Documents;

(e) all authorizations, approvals, licenses, permits, consents and orders of any governmental authority, legislative body, board, agency or commission having jurisdiction of the matter which are required for the due authorization of, which would constitute a condition precedent to or the absence of which would materially adversely affect the due performance by the Issuer of its obligations in connection with the issuance of the Bonds under this Purchase Contract, the Indenture and the transactions contemplated thereby have been duly obtained, except for such approvals, consents and orders as may be required under the blue sky or securities laws of any state in connection with the offering and sale of the Bonds; and, except as described in or contemplated by the Official Statement, all authorizations, approvals, licenses, permits, consents and orders of any governmental authority, legislative body, board, agency or commission having jurisdiction in the matter which are required for the due authorization of, which would constitute a condition precedent to or the absence of which would materially adversely affect the due performance by the Issuer of its respective obligations under the Bonds or any of the Issuer Documents have been duly obtained;

(f) the Bonds, when issued, will conform to the description thereof contained in the Official Statement, including under the caption “THE BONDS;” the Indenture, upon its execution and delivery, will conform to the summaries thereof contained in the Official Statement, including under the caption “SECURITY FOR THE BONDS” and in APPENDIX C – “DEFINITIONS OF CERTAIN TERMS” and APPENDIX D – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE”; the Commodity Purchase Agreement, upon its execution and delivery, will conform to the summaries thereof contained in the Official Statement, including under the caption “THE COMMODITY PURCHASE AGREEMENT”; the Commodity Supply Contract, upon its execution and delivery, will conform to the summary thereof contained in the Official Statement, including under the caption “THE COMMODITY SUPPLY CONTRACT”; the Commodity Swaps, upon their execution and delivery, will conform to the summaries thereof contained in the Official Statement, including under the caption “THE COMMODITY SWAPS”; the Investment Agreement, upon its execution and delivery, will conform to the summary thereof contained in the Official Statement, including under the caption “SECURITY FOR THE BONDS – Investment of Funds”; the Re-Pricing Agreement, upon its execution and delivery, will conform to the summaries thereof contained in the Official Statement, including under the caption “THE RE-PRICING AGREEMENT”; and the Continuing Disclosure Agreement, upon its execution and delivery, will conform to the summary thereof contained in the Official Statement, including under the caption “CONTINUING DISCLOSURE” and will be substantially in the form attached to the Official Statement as APPENDIX E;

(g) the Bonds, when issued, authenticated and delivered in accordance with the Indenture and sold to the Underwriter as provided herein, will be validly issued and outstanding limited obligations of the Issuer, entitled to the benefits of the Indenture; and upon such issuance, authentication and delivery, the Indenture will provide, for the benefit of the holders from time to time of the Bonds, a legally valid and binding pledge of and lien on the Trust Estate, including the Revenues (as such terms shall be defined in the Indenture) and the funds, accounts and agreements pledged under the Indenture, subject only to (i) the pledge of and lien on the Commodity [Swap] Reserve Account and (ii) the provisions of the Indenture permitting the application thereof on the terms and conditions set forth in the Indenture;

(h) between the date of this Purchase Contract and the Closing Date, the Issuer will not, without the prior written consent of the Underwriter, offer or issue any bonds, notes or other obligations for borrowed money, or incur any material liabilities, direct or contingent, in either case, which would materially adversely affect the rights of the Underwriter hereunder or the security for the Bonds;

(i) except as described in the Official Statement, there is no action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, public board or body, pending or, to the best knowledge of the Issuer, threatened against the Issuer (nor to the best knowledge of the Issuer is there any such action, suit, proceeding, inquiry or investigation pending or, to the best of the Issuer’s knowledge, threatened against SMUD), affecting the corporate existence of the Issuer or the titles of its officers to their respective offices, or affecting or seeking to prohibit, restrain or enjoin

the sale, issuance or delivery of the Bonds or the collection of the Revenues, or the pledge of and lien on the Trust Estate, including the Revenues and the funds, accounts and agreements pledged under the Indenture, or contesting or affecting as to the Issuer the validity or enforceability of the Act, the JPA Agreement, the Resolution, the Bonds, or any Issuer Document, or contesting the excludability of interest on the Bonds from gross income for federal income tax purposes as described in the Official Statement, or contesting the completeness or accuracy of the Official Statement or any supplement or amendment thereto, or contesting the powers of the Issuer or any authority for the issuance of the Bonds, the adoption of the Resolution or the execution and delivery by the Issuer of any of the Issuer Documents, nor, to the best knowledge of the Issuer, is there any basis for any such action, suit, proceeding, inquiry or investigation, wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Act as to the Issuer or the authorization, execution, delivery or performance by the Issuer of the Resolution, the Bonds, any Issuer Document or the JPA Agreement;

(j) the Issuer will furnish such information, execute such instruments and take such other action in cooperation with the Underwriter as the Underwriter may reasonably request in order (i) to qualify the Bonds for offer and sale under the blue sky or other securities laws and regulations of such states and other jurisdictions of the United States as the Underwriter may designate and (ii) to determine the eligibility of the Bonds for investment under the laws of such states and other jurisdictions, and will use its best efforts to continue such qualifications in effect so long as required for the distribution of the Bonds; *provided, however*, that the Issuer shall not be required to execute a general consent to service of process or qualify to do business in connection with any such qualification or determination in any jurisdiction;

(k) at the time of the Issuer's acceptance hereof, the Official Statement did not and, at all times subsequent thereto up to and including the Closing Date (except for a brief period between any change in any relevant circumstance and the timely amendment or supplement of the Official Statement to reflect such change), the Official Statement (as the same may be supplemented or amended pursuant to Section 2(c) hereof) will not, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(l) if the Official Statement is supplemented or amended pursuant to Section 2(c) hereof, at the time of each supplement or amendment thereto and at all times subsequent thereto up to and including the Closing Date (except for a brief period between any change in any relevant circumstance and the timely amendment or supplement of the Official Statement to reflect such change), the Official Statement as so supplemented or amended will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(m) as of the date thereof, the Preliminary Official Statement did not contain any untrue statement of a material fact or omit to state any material fact required to be

stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; and

(n) except as disclosed in the Preliminary Official Statement and the Official Statement, neither the Issuer nor, to the Issuer's knowledge, SMUD, has failed during the past five years to comply in all material respects with any previous undertakings in a written continuing disclosure contract or agreement under Rule 15c2-12.

SECTION 7. CLOSING.

(a) Not later than 1:00 p.m., New York City time, on [Closing Date], 2024, or at such earlier or later date as may be mutually agreed upon by the Issuer and the Underwriter, the Issuer will, subject to the terms and conditions hereof: (i) deliver one duly executed and authenticated bond for each maturity of the Bonds for the account of the Underwriter on behalf of the Underwriter through the facilities of The Depository Trust Company, New York, New York ("*DTC*"), registered in the name of Cede & Co., as nominee of DTC; and (ii) deliver to the Underwriter the other documents hereinafter mentioned. Subject to the terms and conditions hereof, the Underwriter shall accept such delivery and pay the purchase price of the Bonds, as set forth in Section 1 hereof, which purchase price shall be remitted by the Underwriter to the Trustee, by wire transfer in immediately available funds, for application by the Trustee in accordance with the provisions of the Indenture. Delivery of the Bonds shall be made through the facilities of DTC and delivery of the other documents shall be made through an electronic closing room maintained by Orrick, Herrington & Sutcliffe LLP, or such other means as shall have been mutually agreed upon by the Issuer and the Underwriter.

(b) If the Closing does not occur on or before the date specified in Section 7(a) because of the inability of either party hereto to satisfy the conditions to the Closing, then this Purchase Contract shall be deemed terminated with the same force and effect as if it were terminated pursuant to Section 9 hereof, unless the parties hereto mutually agree otherwise in writing.

SECTION 8. CLOSING CONDITIONS.

The Underwriter has entered into this Purchase Contract in reliance upon the representations and warranties of the Issuer contained herein, and in reliance upon the representations and warranties to be contained in the documents and instruments to be delivered at the Closing and upon the performance by the Issuer of its obligations hereunder, both as of the date hereof and as of the Closing Date. Accordingly, the Underwriter's obligations under this Purchase Contract to purchase, to accept delivery of and to pay for the Bonds shall be conditioned upon the performance by the Issuer of its obligations to be performed hereunder and under such documents and instruments at or prior to the Closing, and shall also be subject to the following additional conditions:

(a) the representations and warranties of the Issuer contained herein shall be true, complete and correct on the date hereof and on and as of the Closing Date, as if made on the Closing Date;

(b) at the time of the Closing, the JPA Agreement, the Resolution, and the Issuer Documents shall be in full force and effect in accordance with their respective terms and shall not have been amended, modified or supplemented, and the Official Statement shall not have been supplemented or amended, except in any such case as may have been agreed to by the Underwriter;

(c) at the time of the Closing, all official action of the Issuer and of the other parties thereto relating to the Resolution, the Bonds, and the Issuer Documents shall be in full force and effect in accordance with their respective terms and shall not have been amended, modified or supplemented in any materially adverse respect;

(d) at the time of the Closing, there shall have been no material adverse change in (i) any required permits, licenses and approvals (including rights of way) and arrangements for financing of the Commodity Project, or (ii) the financial position, results of operations or condition, financial or otherwise (to the extent applicable), of the Issuer or of SMUD, as all the foregoing matters are described in the Official Statement; and

(e) at or prior to the Closing, the Underwriter shall have received each of the following documents:

(1) the Preliminary Official Statement and the Official Statement and each supplement or amendment, if any, thereto, executed on behalf of the Issuer, in the case of the Official Statement, by an Authorized Officer;

(2) a copy of the Resolution, certified by the Secretary of the Issuer (the "*Secretary*") as having been duly adopted by the Issuer and as being in full force and effect;

(3) a certified copy of the Joint Powers Agreement;

(4) the Indenture, executed by an Authorized Officer and by an authorized representative of the Trustee;

(5) copies of the executed Commodity Supply Contract, Commodity Purchase Agreement, Collateral Agency Agreement, Investment Agreement, Custodial Agreements, Re-Pricing Agreement, and Commodity Swaps, together with copies of the closing deliverables required thereunder;

(6) a copy of this Purchase Contract, executed by an Authorized Officer of the Issuer and the Underwriter;

(7) (A) copies of the limited liability company agreement of the Commodity Supplier and the SPE Master Custodial Agreement, (B) an incumbency certificate and a Delaware good standing certificate of the Commodity Supplier, and (C) disclosure letters of the Commodity Supplier and J. Aron regarding certain

information contained in the Official Statement under the caption “GSG, J. ARON AND THE COMMODITY SUPPLIER”;

(8) a copy of the executed Commodity Sale and Service Agreement between the Commodity Supplier and J. Aron, together with a copy of the executed CSSA Guaranty issued by GSG;

(9) a copy of the resolution of SMUD relating to the Commodity Project (including, but not limited to, the approval of the execution and delivery of the Commodity Supply Contract);

(10) an opinion, dated the Closing Date and addressed to the Issuer, of Orrick, Herrington & Sutcliffe LLP, as Bond Counsel, in substantially the form included in the Official Statement as APPENDIX F, together with reliance letters addressed to the Underwriter and the Trustee;

(11) a supplemental opinion, dated the Closing Date and addressed to the Underwriter of Orrick, Herrington & Sutcliffe LLP, as Bond Counsel, in substantially the form attached hereto as *Exhibit A*;

(12) an opinion, addressed to the Authority and the Underwriter, of General Counsel to the Issuer, in substantially the form attached hereto as *Exhibit B*;

(13) a certificate, dated the Closing Date, signed by an Authorized Officer of the Issuer, in substantially the form attached hereto as *Exhibit C*;

(14) an opinion, dated the Closing Date and addressed to the Issuer and the Underwriter, of general counsel to SMUD, in substantially the form attached as Exhibit E to the Commodity Supply Contract;

(15) opinions of in-house counsel to J. Aron and of Sheppard, Mullin, Richter & Hampton LLP, special counsel to the Commodity Supplier and to J. Aron, dated the date of Closing, in substantially the forms attached hereto as *Exhibit D* and addressed as set forth in such forms;

(16) an opinion, dated the Closing Date and addressed to the Underwriter, of counsel to GSG with respect to the CSSA Guaranty, in form and substance acceptable to the Underwriter;

(17) an opinion, dated the Closing Date and addressed to the Underwriter, of Chapman and Cutler LLP, counsel to the Underwriter, in form and substance acceptable to the Underwriter;

(18) an opinion, dated the Closing Date and addressed to the Issuer and the Underwriter, of counsel to the Trustee, in form and substance acceptable to the addressees of such opinion;

(19) a copy of the executed _____ Agreement (the “*Funding Agreement*”) between the Commodity Supplier and _____ (the “*Funding Recipient*”)[, together with the guarantee (the “*Funding Recipient Guaranty*”) issued by _____];

(20) copies of the certificates, opinions and other closing deliverables required by the Funding Agreement;

(21) a copy of the Blanket Issuer Letter of Representations of the Issuer addressed to DTC, executed by the Issuer;

(22) an executed certificate of the Issuer covering such matters as shall be necessary, in the opinion of Bond Counsel, to establish that interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 together with a certificate of SMUD with respect to its use of Commodities under the Commodity Supply Contract and related matters;

(23) evidence satisfactory to the Underwriter that the Bonds have been rated “[]” by Moody’s Investors Service, Inc. (“*Moody’s*”);

(24) the Continuing Disclosure Agreement, executed by an Authorized Officer;

(25) specimen Bonds;

(26) instruction of the Issuer to authenticate and deliver the Bonds, as required by Section 2.3 of the Indenture;

(27) a copy of the certificate of the Trustee regarding execution of documents;

(28) copies of each Investment Agreement, executed by the Trustee and the respective providers of such investment agreements, together with copies of the closing deliverables required thereunder;

(29) a certificate, dated the Closing Date, signed by an officer of SMUD, in substantially the form attached as Exhibit D to the Commodity Supply Contract;

(30) a transcript of all proceedings of the Issuer relating to the authorization and issuance of the Bonds; and

(31) such additional legal opinions, certificates, instruments and other documents as the Underwriter may reasonably request to evidence the truth and accuracy, as of the date hereof and as of the Closing Date, of the Issuer's representations and warranties contained herein and of the statements and information contained in the Official Statement and the due performance or satisfaction by the Issuer on or prior to the Closing Date of all the agreements then to be performed and conditions then to be satisfied by it.

All the opinions, letters, certificates, instruments and other documents mentioned above or elsewhere in this Purchase Contract shall be deemed to be in compliance with the provisions hereof if, but only if, they are in form and substance satisfactory to the Underwriter. The opinion of Bond Counsel which is referred to in clause (10) of paragraph (e) of this Section 8 shall be deemed satisfactory provided it is substantially in the form included in the Official Statement as APPENDIX F, and the opinions and certificates referred to in clauses (10), (11), (12), (13), and (15) of such paragraph shall be deemed satisfactory provided they are substantially in the forms attached as exhibits to this Purchase Contract, the opinion referred to in clause (14) of such paragraph shall be deemed satisfactory provided it is substantially in the form attached as Exhibit E to the Commodity Supply Contract, and the certificate referred to in clause (29) of such paragraph shall be deemed satisfactory provided it is substantially in the form attached as Exhibit D to the Commodity Supply Contract.

SECTION 9. TERMINATION.

The Underwriter shall have the right to terminate the Underwriter's obligations under this Purchase Contract to purchase, to accept delivery of and to pay for the Bonds by notifying the Issuer of its election to do so if, after the execution hereof and prior to the Closing:

(a) the marketability of the Bonds or the market price thereof, in the opinion of the Underwriter, has been materially adversely affected by:

(i) an amendment to the Constitution of the United States;

(ii) any legislation (A) enacted or introduced by the United States Congress, (B) recommended to the United States Congress for passage by the President of the United States, the Treasury Department of the United States or the Internal Revenue Service or (C) favorably reported for passage to either House of the United States Congress by any Committee of such House or by a Conference Committee of both Houses to which such legislation has been referred for consideration with the purpose or effect, directly or indirectly, of imposing federal income taxation upon the interest on bonds of the Issuer (including the Bonds), the Issuer, or its property or income but only, however, if the occurrence of any of the foregoing events is generally accepted by the municipal bond market as potentially affecting the federal tax status of the Issuer, its property or income or the interest on its bonds (including the Bonds); provided, that any such legislation which only diminishes the value of, as opposed to eliminating, the exclusion from gross income for federal income tax purposes of interest on bonds of the Issuer (including the

Bonds) will not give the Underwriter the right to terminate its obligations under this Purchase Contract;

(iii) any decision rendered by a court established under Article III of the Constitution of the United States or the Tax Court of the United States with the purpose or effect, directly or indirectly, of imposing federal income taxation upon the interest on bonds of the Issuer (including the Bonds), the Issuer, or its property or income;

(iv) any final ruling or regulation on behalf of the Treasury Department of the United States or the Internal Revenue Service with the purpose or effect, directly or indirectly, of imposing federal income taxation upon the interest on bonds of the Issuer (including the Bonds), the Issuer, or its property or income;

(v) there shall have occurred any outbreak or escalation of hostilities involving the United States or any national or international calamity or crisis relating to the effective operation of the government of, or the financial community in, the United States;

(vi) there shall have been any downgrading, suspension or withdrawal, or any official statement as to a possible downgrading, suspension or withdrawal, of the rating by Moody's of the Bonds;

(vii) an event described in Section 2(c) hereof shall have occurred prior to the Closing Date which in the opinion of the Underwriter requires the preparation and publication of a supplement or amendment to the Official Statement;

(viii) there shall have occurred the declaration of a general banking moratorium by any authority of the United States, the State of New York or the State, the general suspension of trading on the New York Stock Exchange or any other national securities exchange, or a material disruption in commercial banking or securities settlement or clearances services;

(ix) legislation is enacted or a decision by a court of competent jurisdiction is rendered, or a final ruling or regulation is issued by the SEC or other governmental agency having jurisdiction of the subject, to the effect that the issuance, offering or sale of obligations of the general character of the Bonds is in violation of, or that such obligations are not exempt from the registration, qualification under or other similar requirements of, the Securities Act of 1933, amended as then in effect, or the Trust Indenture Act of 1939, as amended and as then in effect; or

(x) the New York Stock Exchange or other national securities exchange, or any governmental authority shall have:

(1) imposed additional material restrictions not in force as of the date hereof with respect to trading in securities generally, or to the Bonds or obligations similar to the Bonds; or

(2) materially increased restrictions now in force with respect to the extension of credit by or the charge to the net capital requirements of the Underwriter or broker/dealers.

SECTION 10. EXPENSES.

(a) The Underwriter shall be under no obligation to pay, and the Issuer shall pay, any expenses incident to the performance of the Issuer's obligations hereunder including, but not limited to: (i) the costs of preparation, printing and delivery of the Indenture; (ii) the costs of preparation, printing and delivery of the Preliminary Official Statement and the Official Statement and any supplements and amendments thereto; (iii) the costs of preparation of the Bonds; (iv) the fees and disbursements of Bond Counsel and General Counsel to the Issuer; (v) the fees and disbursements of PFM Financial Advisors LLC ("*PFM*"), municipal advisor; (vi)) the fees and disbursements of Samuel Klein and Company, as verification agent; and (vii) the fees and disbursements of any other engineers, accountants and other experts, consultants or advisers retained by the Issuer. Additionally, unless the Issuer and the Underwriter otherwise agree, the Issuer shall pay for all incidental expenses (including, but not limited to, transportation, lodging and meals of Issuer personnel) incurred by or on behalf of the Issuer relating to the transaction contemplated by this Purchase Contract.

(b) The Underwriter shall pay only: (i) the cost of the preparation of this Purchase Contract and the Blue Sky Memorandum prepared in connection with the Bonds; (ii) all advertising expenses and blue sky filing fees in connection with the public offering of the Bonds; (iii) its own out-of-pocket expenses in connection with the public offering of the Bonds; (iv) any fees of the California Debt and Investment Advisory Commission and (v) the fees and expenses of Chapman and Cutler LLP, counsel to the Underwriter. The Issuer acknowledges that a portion of the Underwriter's discount is intended to reimburse the Underwriter for incidental expenses (including, but not limited to, transportation, lodging and meals of Underwriter's personnel) incurred by the Underwriter (on its own behalf) in connection with the transaction contemplated by this Purchase Contract.

(c) The provisions of this Section 10 shall survive any termination of this Purchase Contract.

SECTION 11. NO ADVISORY OR FIDUCIARY ROLE.

The Issuer acknowledges and agrees that: (i) the primary role of the Underwriter, as an underwriter, is to purchase securities, for resale to investors, in an arm's-length commercial transaction between the Issuer and the Underwriter and that the Underwriter has financial and other

interests that differ from those of the Issuer; (ii) the Underwriter is not acting as a municipal advisor, financial advisor, or fiduciary to the Issuer and has not assumed any advisory or fiduciary responsibility to the Issuer with respect to the transaction contemplated hereby and the discussions, undertakings and procedures leading thereto (irrespective of whether the Underwriter has provided other services or is currently providing other services to the Issuer on other matters); (iii) the only obligations the Underwriter has to the Issuer with respect to the transaction contemplated hereby expressly are set forth in this Purchase Contract, provided that nothing in this Purchase Contract shall be construed to limit the Underwriter's obligation of fair dealing under MSRB Rule G-17; and (iv) the Issuer has consulted its own financial and/or municipal, legal, accounting, tax and other advisors, as applicable, to the extent it deems appropriate. If the Issuer would like a municipal advisor in this transaction that has legal fiduciary duties to the Issuer, then the Issuer is free to engage a municipal advisor to serve in that capacity.

SECTION 12. ESTABLISHMENT OF PRICE.

(a) The Underwriter agrees to assist the Issuer in establishing the issue price of the Bonds and shall execute and deliver to the Issuer at Closing an "issue price" or similar certificate, together with the supporting pricing wires or equivalent communications, in such form as may be appropriate or necessary, in the reasonable judgment of the Underwriter, the Issuer and Bond Counsel, to accurately reflect, as applicable, the sales price or prices or the initial offering price or prices to the public of the Bonds. All actions to be taken by the Issuer under this section to establish the issue price of the Bonds may be taken on behalf of the Issuer by PFM and any notice or report to be provided to the Issuer may be provided to PFM.

(b) The Issuer will treat the first price at which 10% of each maturity of the Bonds (the "10% test") is sold to the public as the issue price of that maturity (if different interest rates apply within a maturity, each separate CUSIP number within that maturity will be subject to the 10% test). At or promptly after the execution of this Purchase Contract, the Underwriter shall report to the Issuer the price or prices at which it has sold to the public each maturity of Bonds. If at that time the 10% test has not been satisfied as to any maturity of the Bonds, the Underwriter agrees to promptly report to the Issuer the prices at which it sells the unsold Bonds of that maturity to the public. That reporting obligation shall continue, whether or not the Closing Date has occurred, until the 10% test has been satisfied as to the Bonds of that maturity or until all Bonds of that maturity have been sold to the public.

(c) The Underwriter confirms that it has offered the Bonds to the public on or before the date of this Purchase Contract at the offering price or prices (the "initial offering price"), or at the corresponding yield or yields, set forth in *Schedule I*.

(d) The Underwriter confirms that there is no selling group agreement or retail distribution agreement relating to the initial sale of the Bonds.

(e) The Underwriter acknowledges that sales of any Bonds to any person that is a related party to the Underwriter shall not constitute sales to the public for purposes of this section. Further, for purposes of this section:

(i) “*public*” means any person other than the Underwriter or a related party,

(ii) “*underwriter*” means (A) any person that agrees pursuant to a written contract with the Issuer (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the public and (B) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (A) to participate in the initial sale of the Bonds to the public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the public),

(iii) a purchaser of any of the Bonds is a “*related party*” to the Underwriter if the Underwriter and the purchaser are subject, directly or indirectly, to (i) at least 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (ii) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (iii) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other), and

(iv) “*sale date*” means the date of execution of this Purchase Contract by all parties.

SECTION 13. NOTICES.

Any notice or other communication to be given to the Issuer under this Purchase Contract may be given by delivering the same in writing to the Issuer’s address set forth above, and any notice or other communication to be given to the Underwriter under this Purchase Contract may be given by delivering the same in writing to Goldman Sachs & Co. LLC, 200 West Street, 33rd Floor, New York, NY 10282, Attention: Municipal Finance Department.

SECTION 14. PARTIES IN INTEREST.

This Purchase Contract is made solely for the benefit of the Issuer and the Underwriter (including the successors or assigns of the Underwriter) and no other person shall acquire or have any right hereunder or by virtue hereof. All of the Issuer’s representations, warranties and agreements contained in this Purchase Contract shall remain operative and in full force and effect, regardless of: (i) any investigations made by or on behalf of the Underwriter; (ii) delivery of and payment for the Bonds pursuant to this Purchase Contract; and (iii) any termination of this Purchase Contract.

SECTION 15. EFFECTIVENESS.

This Purchase Contract shall become effective upon the execution hereof by an Authorized Officer of the Issuer and shall be valid and enforceable at the time of such execution.

SECTION 16. GOVERNING LAW.

This Purchase Contract will be governed by and construed in accordance with the laws of the State of California.

SECTION 17. ENTIRE AGREEMENT.

This Purchase Contract constitutes the entire agreement between the parties hereto with respect to the matters covered hereby, and supersedes all prior agreements and understandings between the parties regarding the transaction contemplated by this Purchase Contract and the process leading thereto. This Purchase Contract shall only be amended, supplemented or modified in a writing signed by both of the parties hereto.

SECTION 18. REFERENCES.

References herein to “Sections,” “Schedules” and “Exhibits” refer to the Sections of and Schedules and Exhibits to this Purchase Contract unless the context requires otherwise.

[signature page follows]

SECTION 19. HEADINGS.

The headings of the sections of this Purchase Contract are inserted for convenience only and shall not be deemed to be a part hereof.

Very truly yours,

GOLDMAN SACHS & Co. LLC

By: _____

Name: Joseph R. Natoli

Its: Managing Director

Accepted:

This ____ day of _____, 2024

NORTHERN CALIFORNIA ENERGY AUTHORITY

By: _____

Name: Russell Mills

Its: Treasurer

SCHEDULE I
MATURITY SCHEDULE

\$000,000,000
NORTHERN CALIFORNIA ENERGY AUTHORITY
COMMODITY SUPPLY REVENUE REFUNDING BONDS
SERIES 2024

Maturity [] 1	Principal Amount	Interest Rate	Yield	Price	CUSIP
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\$ _____ % Term Bond due _____, 20__^c, Yield: _____, Price: _____

CUSIP: _____

^c Priced to mandatory tender on _____, 20__.

EXHIBIT A

FORM OF SUPPLEMENTAL OPINION OF BOND COUNSEL

[Closing Date], 2024

Goldman Sachs & Co. LLC
New York, New York

Northern California Energy Authority
Commodity Supply Revenue Refunding Bonds, Series 2024
(Supplemental Opinion)

Ladies and Gentlemen:

This letter is addressed to you, as Underwriter, pursuant to Section 8(e)(11) of the Bond Purchase Contract, dated [Pricing Date], 2024 (the “Purchase Contract”), between you and the Northern California Energy Authority (the “Issuer”), providing for the purchase of \$000,000,000 aggregate principal amount of Northern California Energy Authority Commodity Supply Revenue Refunding Bonds, Series 2024 (the “Bonds”). The Bonds are being issued pursuant to an amended and restated trust indenture, dated as of [_____] 1, 2024 (the “Trust Indenture”), between the Issuer and Computershare Trust Company, N.A., as trustee (the “Trustee”). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Trust Indenture or, if not defined in the Trust Indenture, in the Purchase Contract.

We have delivered our final legal opinion (the “Bond Opinion”) as bond counsel to the Issuer concerning the validity of the Bonds and certain other matters, dated the date hereof and addressed to the Issuer. You may rely on such opinion as though the same were addressed to you.

In connection with our role as bond counsel to the Issuer, we have reviewed the Purchase Contract; the Trust Indenture; the Commodity Purchase Agreement; the Commodity Supply Contract; the Tax Certificate and Agreement, dated the date hereof (the “Tax Certificate”), between the Issuer and the Sacramento Municipal Utility District (“SMUD”); certain portions of the preliminary official statement of the Issuer, dated _____, 2024, with respect to the Bonds (the “Preliminary Official Statement”) and of the official statement of the Issuer, dated [Pricing Date], 2024, with respect to the Bonds (the “Official Statement”); opinions of counsel to the Issuer, the Trustee and SMUD; certificates of the Issuer, the Trustee, SMUD and others; and such other documents, opinions and matters to the extent we deemed necessary to provide the opinions or conclusions set forth herein.

The opinions and conclusions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions or conclusions may be affected by actions taken or omitted or events occurring after the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after the date hereof. We have assumed the genuineness of all documents and signatures

presented to us (whether as originals or as copies) and the due and legal execution and delivery thereof by, and validity against, any parties other than the Issuer. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the third paragraph hereof. We have further assumed compliance with all covenants and agreements contained in such documents. In addition, we call attention to the fact that the rights and obligations under the Bonds, the Trust Indenture, the Commodity Purchase Agreement, the Commodity Supply Contract, the Tax Certificate and the Purchase Contract and their enforceability may be subject to bankruptcy, insolvency, reorganization, receivership, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against joint powers authorities and municipal utility districts in the State of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinions with respect to the state or quality of title to or interest in any of the assets described in or as subject to the lien of the Trust Indenture or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such assets. Finally, we undertake no responsibility for the accuracy, except as expressly set forth in numbered paragraph 2 below, completeness or fairness of the Official Statement or other offering material relating to the Bonds and express no opinion relating thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions or conclusions:

1. The Purchase Contract has been duly executed and delivered by, and is a valid and binding agreement of, the Issuer.

2. The statements contained in the Official Statement under the captions "INTRODUCTION – The Bonds," " – Security for the Bonds" and " – Debt Service and Commodity Swap Reserves;" "SECURITY FOR THE BONDS;" "THE BONDS;" "TAX MATTERS;" "APPENDIX C – DEFINITIONS OF CERTAIN TERMS" (to the extent such information relates to the Indenture); "APPENDIX D – SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE," and "APPENDIX F – PROPOSED FORM OF OPINION OF BOND COUNSEL;" excluding any material that may be treated as included under such captions by cross-reference or references to other documents or sources, insofar as such statements expressly summarize certain provisions of the Indenture and the form and content of our Bond Opinion are accurate in all material respects.

3. We are not passing upon and do not assume any responsibility for the accuracy (except as explicitly stated in paragraph 2 above), completeness or fairness of any of the statements contained in the Preliminary Official Statement or in the Official Statement and make no representation that we have independently verified the accuracy, completeness or fairness of any such statements. We do not assume any responsibility for any electronic version of the Preliminary Official Statement or the Official Statement, and assume that any such version is identical in all respects to the printed version. In our capacity as bond counsel to the Issuer in connection with

issuance of the Bonds, we participated in conferences with your representatives, your counsel, representatives of the Issuer, the Issuer's counsel, the Commodity Supplier, in various capacities, including but not limited to commodities seller and receivables purchaser, the Commodity Supplier's counsel, SMUD, SMUD's counsel, the Issuer's financial advisor, and others, during which the contents of the Preliminary Official Statement or the Official Statement and related matters were discussed. Based on our participation in the above-mentioned conferences (which did not extend beyond the date of the Official Statement), and in reliance thereon, on oral and written statements and representations of the Issuer, SMUD and others and on the records, documents, certificates, opinions and matters herein mentioned, subject to the limitations on our role as bond counsel to the Issuer, we advise you as a matter of fact and not opinion that (a) as of [Pricing Date], 2024, no facts had come to the attention of the attorneys in our firm rendering legal services with respect to the Preliminary Official Statement which caused us to believe as of that date that the Preliminary Official Statement contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, and (b) as of the date of the Official Statement and as of the date hereof, no facts had come to the attention of the attorneys in our firm rendering legal services with respect to the Official Statement which caused us to believe as of the date of the Official Statement and as of the date hereof that the Official Statement contained or contains any untrue statement of a material fact or omitted or omits to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that, we expressly exclude from the scope of this paragraph and express no view or opinion about (i) with respect to the Preliminary Official Statement, any difference in information contained therein compared to what is contained in the Official Statement, whether or not related to pricing or sale of the Bonds, and whether any such difference is material and should have been included in the Preliminary Official Statement, and (ii) with respect to both the Preliminary Official Statement and the Official Statement, any CUSIP numbers, financial, accounting, statistical or economic, engineering or demographic data or forecasts, numbers, charts, tables, graphs, estimates, projections, assumptions or expressions of opinion, any information about book-entry, Cede & Co., The Depository Trust Company, verification, ratings, rating agencies, the Underwriter, underwriting, certain relationships among the parties, the Commodity Supplier, the J. Aron Commodity Swap, the Commodity Swap Counterparty, The Goldman Sachs Group, Inc., the GSG Guaranty, the financial advisor, any investment agreement providers or any investment agreements, Appendices F, G and H or any statements about compliance with prior continuing disclosure obligations, included or referred to therein or omitted therefrom. No responsibility is undertaken or view expressed with respect to any other disclosure document, materials or activity, or as to any information from another document or source referred to by or incorporated by reference in the Preliminary Official Statement or the Official Statement.

This letter is furnished by us as bond counsel to the Issuer. No attorney-client relationship has existed or exists between our firm and you in connection with the Bonds or by virtue of this letter. We disclaim any obligation to update this letter. This letter is delivered to you as Underwriter of the Bonds, is solely for your benefit as such Underwriter in connection with the original issuance of the Bonds on the date hereof, and is not to be used, circulated, quoted or otherwise referred to or relied upon for any other purpose or by any other person. This letter is not intended to, and may not, be relied upon by owners of Bonds or by any other party to whom it is not specifically addressed.

Very truly yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

EXHIBIT B

FORM OF OPINION OF GENERAL COUNSEL TO THE ISSUER

[Closing Date], 2024

To the Addressees on
Schedule I attached hereto

I have acted as general counsel to Northern California Energy Authority (the “*Issuer*”) in connection with its issuance of \$000,000,000 Commodity Supply Revenue Refunding Bonds, Series 2024 (the “*Bonds*”). This opinion is rendered pursuant to Section 8(e)(12) of the Bond Purchase Contract, dated [Pricing Date], 2024 (the “*Bond Purchase Contract*”), by and between Goldman Sachs & Co. LLC (the “*Underwriter*”) and the Issuer. Capitalized terms used and not defined in this opinion shall have the same meanings assigned to them in the Bond Purchase Contract.

In rendering this opinion, I have examined originals or copies satisfactory to me of such records and other documents as I have deemed necessary and relevant as a basis for the opinions hereinafter expressed. In my examination, I have assumed the genuineness of all signatures, the authenticity of all documents submitted to me as originals, and the conformity of all original documents submitted to me as copies.

In giving the opinions expressed below I do not purport to be expert in or generally familiar with or qualified to express legal opinions based on the laws of any jurisdiction other than the laws of the State of California (the “*State*”).

As to factual matters, I have relied solely upon the documents described herein, the representations and warranties of the Issuer contained in the Issuer Documents, the Preliminary Official Statement, the Official Statement, the JPA Agreement of the Issuer and various certificates and other documents furnished to me by Issuer’s officers and its Commission. In basing the opinions set forth in this letter on “my knowledge,” the words “my knowledge” signify that, in the course of my representation of the Issuer in connection with the issuance of the Bonds, no facts have come to my attention that would give me actual knowledge or actual notice that any such opinions or other matters are not accurate. Except as otherwise stated in this opinion, I have undertaken no investigation or verification of such matters.

Based upon the foregoing examination and review, I am of the opinion that:

1. The Issuer is a joint powers authority and public entity of the State of California, organized and existing pursuant to the provisions of the Joint Exercise of Powers Act, constituting Chapter 5 of Division 7 of Title 1 (commencing with Section 6500) of the California Government Code, as amended and supplemented (the

“Act”), and a joint powers agreement, dated November 8, 2018 (the “*JPA Agreement*”), entered into between the Sacramento Municipal Utility District and the Sacramento Municipal Utility District Financing Authority, and has full legal right, power and authority under the Act and the JPA Agreement to (a) adopt the bond resolution adopted by it on _____, 2024 (the “*Bond Resolution*”), (b) execute and deliver the Official Statement, (c) enter into, execute and deliver the Issuer Documents, (d) sell, issue and deliver the Bonds to the Underwriter, and (e) carry out and consummate the transactions contemplated by the Issuer Documents and the Official Statement, and the Issuer has complied, and will at the Closing be in compliance in all respects, with the terms of the Act, the JPA Agreement and the Issuer Documents as they pertain to such transactions.

2. By all necessary official action, the Issuer has duly authorized all necessary action to be taken by it for (a) the adoption of the Bond Resolution, (b) the issuance and sale of the Bonds, (c) the approval, execution and delivery of, and the performance by the Issuer of the obligations on its part, contained in the Bonds and the Issuer Documents, and (d) the consummation by it of all other transactions contemplated by the Official Statement and the Issuer Documents.

3. The Bond Resolution was duly and validly adopted by the Issuer and all other proceedings pertinent to the validity and enforceability of the Bonds have been duly and validly adopted or undertaken in compliance with all applicable procedural requirements of the Issuer and in compliance with the Constitution and laws of the State, including the Act and the JPA Agreement, and the Bond Resolution is in full force and effect and has not been amended.

4. The Issuer Documents have been duly authorized, executed and delivered by the Issuer, and constitute legal, valid and binding obligations of the Issuer enforceable against the Issuer in accordance with their respective terms, except to the extent limited by bankruptcy, insolvency, reorganization, receivership, arrangement, fraudulent conveyance, moratorium or other similar laws and equitable principles of general application relating to or affecting the enforcement of creditors’ rights and to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against public entities in the State; and the Bonds, when issued, delivered and paid for, will constitute legal, valid and binding obligations of the Issuer entitled to the benefits of the Indenture and are enforceable in accordance with their terms, subject to bankruptcy, insolvency, reorganization, receivership, arrangement, fraudulent conveyance, moratorium and other similar laws and principles of equity relating to or affecting the enforcement of creditors’ rights and to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against public entities in the State; and upon the issuance, authentication and delivery of the Bonds as aforesaid, the Indenture will provide, for the benefit of the holders, from time to time of the Bonds and the Commodity Swap Counterparty the legally valid and binding pledge of and lien it purports to create as set forth therein.

5. The distribution of the Preliminary Official Statement and the Official Statement has been duly authorized by the Issuer.

6. All authorizations, approvals, licenses, permits, consents and orders of any governmental authority, legislative body, board, agency or commission having jurisdiction of the matter which are required for the due authorization of, which would constitute a condition precedent to, or the absence of which would materially adversely affect the due performance by the Issuer of its obligations under the Issuer Documents and the Bonds have been obtained.

7. To my knowledge as general counsel of the Issuer since its inception, there is no legislation, action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, public board or body, pending or, to my knowledge, threatened against the Issuer, affecting the existence of the Issuer or the titles of its officers to their respective offices, or affecting or seeking to prohibit, restrain or enjoin the sale, issuance or delivery of the Bonds or the collection of the Revenues (as defined in the Indenture) pursuant to the Bond Resolution or the Indenture or in any way contesting or affecting the validity or enforceability of the Bonds or the Issuer Documents, or contesting the exclusion from gross income of interest on the Bonds for federal income tax purposes or contesting in any way the completeness or accuracy of the Preliminary Official Statement or the Official Statement or any supplement or amendment thereto, or contesting the powers of the Issuer or any authority for the issuance of the Bonds, the adoption of the Bond Resolution or the execution and delivery of the Issuer Documents, nor, to my knowledge, is there any basis therefor, wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Bonds or the Issuer Documents.

8. The execution and delivery of the Issuer Documents and compliance by the Issuer with the provisions thereof, under the circumstances contemplated herein and therein, will not conflict with or constitute on the part of the Issuer a material breach of or a default under any agreement or instrument to which the Issuer is a party, or violate any existing law, administrative regulation, court order, or consent decree to which the Issuer is subject.

9. To my knowledge, the statements contained in the Preliminary Official Statement and the Official Statement under the captions "NORTHERN CALIFORNIA ENERGY AUTHORITY," "CONTINUING DISCLOSURE" and "LITIGATION" are true and accurate in all material respects.

Notwithstanding anything to the contrary contained above, the foregoing opinion is expressly made subject to the following exceptions, qualifications, and assumptions:

(i) I express no opinion with respect to the validity or enforceability of any provisions of the Issuer Documents or any other documents concerning any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, or severability provisions contained therein.

(ii) I express no opinion as to the enforceability of provisions waiving, directly or indirectly, expressly or impliedly, defenses to obligations or rights granted by law, where such waivers are prohibited by law or are against public policy.

(iii) I except from my opinion any provisions contained in any document which purport to prevent any party from raising an affirmative defense thereto, such as estoppel, illegality, etc., if such affirmative defense arises or is asserted to have arisen out of any action by any party which has not been brought to my attention, or which purports to prevent any party from raising a claim of fraud.

(iv) I except from my opinion any provisions contained in any of the documents which could be construed as waiving service of process or any applicable statute of limitations defense or which establish any rights to specific performance.

(v) My opinion as to enforceability is limited by standards of good faith, fair dealing, materiality, and reasonableness that may be applied by a court to the exercise of certain rights and remedies; limitations based on statutes or on public policy limiting a person's right to waive the benefit of statutory provisions or of a common law right; and limitations releasing a party from or indemnifying a party against liability for its own wrongful or negligent act when such release or indemnification is contrary to public policy.

(vi) My opinion is limited to the matters stated herein and no opinion may be inferred or implied beyond the matters expressly stated herein. The opinions expressed in this letter are given solely for your use and benefit in connection with the transactions referred to herein and no other person may use or rely on this opinion letter, nor may it be used, relied upon or circulated or quoted in relation to any other transaction which is not related to transactions referred to herein, without my prior express written consent. This opinion is provided to you as a legal opinion only and not as a warranty or guarantee with respect to the matter described herein or in the documents referred to herein.

(vii) The scope of this opinion is limited to those issues and parties specifically considered herein and no further or more expansive opinion is implied or should be inferred from any opinion expressed herein. On such basis, any variation or difference in the facts upon which this opinion is based might affect my conclusions in an adverse manner and make them inaccurate.

Respectfully submitted,

By: _____

SCHEDULE I

1. Northern California Energy Authority
Sacramento, California
2. Computershare Trust Company, N.A.
Minneapolis, Minnesota
3. J. Aron & Company LLC
New York, New York
4. Goldman Sachs & Co. LLC
New York, New York
5. Moody's Investors Service
New York, New York

EXHIBIT C

NORTHERN CALIFORNIA ENERGY AUTHORITY

CERTIFICATE

The undersigned, _____, _____ of Northern California Energy Authority (the “*Issuer*”), hereby certifies that:

1. The representations and warranties of the Issuer contained in the Bond Purchase Contract, dated [Pricing Date], 2024, by and between the Issuer and the Underwriter named therein (the “*Purchase Contract*”) with respect to the sale by the Issuer of \$000,000,000 in aggregate principal amount of its Commodity Supply Revenue Refunding Bonds, Series 2024 Bonds (the “*Bonds*”), are true, correct and complete in all material respects on and as of the Closing Date, as if made on the Closing Date.

2. No event affecting the Issuer has occurred since the date of the Official Statement which should be disclosed in the Official Statement so that the Official Statement will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, and which has not been disclosed in a supplement or amendment to the Official Statement.

3. The Issuer has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the date hereof pursuant to the Purchase Contract with respect to the issuance of the Bonds.

4. This certificate is being delivered in satisfaction of the conditions of Section 8(e)(13) of the Purchase Contract. All capitalized terms used herein which are not otherwise defined shall have the same meanings as assigned in the Purchase Contract.

NORTHERN CALIFORNIA ENERGY AUTHORITY

By: _____
Its: _____

_____, 2024

EXHIBIT D

FORMS OF OPINION OF COUNSEL TO THE COMMODITY SUPPLIER AND J. ARON

EXHIBIT E

CERTIFICATE

I, the _____ of Northern California Energy Authority (the “*District*”), hereby certify that the Official Statement of the Issuer, dated [Pricing Date], 2024, relating to its Commodity Supply Revenue Refunding Bonds, as the same may have been amended or supplemented to the date hereof, does not contain an untrue statement of a material fact or omit to state a fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. I have made such inquiries as were necessary for me to render this certificate.

Dated: _____, 2024

NORTHERN CALIFORNIA ENERGY AUTHORITY

By: _____
Name: _____
Title: _____