

2022 Budget

Powering forward. Together.



2022 Budget

Strategic Direction

Purpose, Vision & Values

Powering forward. Together.



Core Values: Strategically Essential for SMUD

SD-1	Purpose and Vision Statement	SD-8	Employee Relations
SD-2	Competitive Rates	SD-9	Resource Planning
SD-3	Access to Credit Markets	SD-10	Innovation
SD-4	Reliability	SD-11	Public Power Business Model
SD-5	Customer Relations	SD-12	Ethics
SD-6	Safety	SD-16	Information Management & Security Policy
SD-7	Environmental Leadership	SD-17	Enterprise Risk Management

Key Values: Provide Value-Added Services

SD-13	Economic Development
SD-14	System Enhancement
SD-15	Outreach & Communication
SD-19	Diversified Business

Purpose Statement

SD-1A 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.

Vision Statement

SD-1B 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.

Core Values: Strategically Essential for SMUD

- SD-2 Maintain Competitive Rates
- SD-3 Maintain Access to Credit Markets
- SD-4 Reliability - Meeting customer energy requirements
- SD-5 Maintain a high level of Customer Relations
- SD-6 Safety - Creating a safe environment for employees and the public is a core value of SMUD
- SD-7 Environmental Leadership - Continuous improvement in pollution prevention, minimizing environmental impacts, conserving resources and promoting equity within SMUD's diverse communities
- SD-8 Employee Relations - Developing and maintaining a high quality, diverse and inclusive workplace that engages and inspires employees to commit to SMUD's purpose, vision and values

Core Values: Strategically Essential for SMUD

- SD-9 Provide customer-owners with a sustainable power supply through the use of an integrated Resource Planning process
- SD-10 Deliver innovative solutions, products and services to our customers
- SD-11 Public Power Business Model – Support and strengthen the public power business model
- SD-12 Ethics – Maintain the public trust and confidence in the integrity and ethical conduct of the Board and SMUD employees
- SD-16 Information Management and Security Policy - Proper management of cyber and physical information, as well as physical security, are critical to effective risk management and to ensure regulatory compliance, business resiliency and customer satisfaction. SMUD will take prudent and reasonable measures to ensure information security, physical security, customer privacy and proper record management.
- SD-17 SMUD will implement and maintain an integrated enterprise risk management process that identifies, assesses, manages and mitigates a variety of risks facing SMUD, including financial, supply, operational, physical and cyber security, climate change, legal, legislative and regulatory, and reputational risk.

Key Values: Provide Value-Added Services

- SD-13 Economic Development – Promote economic vitality of our region and the growth of our customer base
- SD-14 Make selected distribution system enhancements such as relocation or underground placement of primary power lines.
- SD-15 Broad Outreach and Communication to SMUD’s customers and the community
- SD-19 Broaden and diversify the products and services that SMUD offers

2022 Budget Performance Metrics

Powering forward. Together.



Performance Metrics



Strategic Direction	Metric	2021 Forecast	2021 Target	2022 Target
SD-2 Competitive Rates	<u>Competitive System Average Rates</u>			
	Percent below Pacific Gas & Electric	36.7%	18.0%	18.0%
	Percent below each Customer Class	31.2%	Meet 10% Goal for each Customer class	Meet 10% Goal for each Customer class
SD-3 Access to Credit Markets	Fixed Charge Ratio of at least 1.50	2.12	1.80	1.93
	SMUD Availability of Generation Assets	99%	97%	97%
	Overall Availability of Transmission Assets	100%	>99.99%	>99.99%
	<u>Distribution System Reliability¹</u>			
	Duration of Outages (SAIDI)			
	SAIDI With Major Event	213.6 min	67.5 - 93.3 min	67.5 - 93.3 min
	SAIDI Excludes Major Event	55.1 min	49.7 - 68.7 min	49.7 - 68.7 min
	Frequency of Outages (SAIFI)			
SAIFI With Major Event	1.48	0.99 - 1.33	0.99 - 1.33	
SAIFI Excludes Major Event	1.09	0.85 - 1.14	0.85 - 1.14	

Performance Metrics (continued)



Strategic Direction	Metric	2021 Forecast	2021 Target	2022 Target
SD-5 Customer Relations	Customer Satisfaction Survey ²	95%	95%	95%
	Value for What You Pay ³	76%	70%	72%
SD-6 Safety	<u>Shift safety culture, improve safety results, and maintain positive financial performance</u>			
	Leading Indicator			
	Employee-Supervisor Interactions	173%	95%	95%
	Incident Reports ≤ 3 days ⁴	88%	95%	95%
	Incident Investigations ≤ 5 days ⁵	65%	95%	95%
	Days Away Restricted Time (DART)			
Severity incidents to 13 or less than by 2025	16	23	20	
Workers' Compensation				
Workers' compensation program performance	\$1.29	\$0.85	\$0.76	
SD-8 Employee Relations	<u>Employee Engagement⁶</u>			
	Sustain Employee Engagement	TBD	>80%	>80%

Performance Metrics (continued)



Strategic Direction	Metric	2021 Forecast	2021 Target	2022 Target
SD-9 Resource Planning	<u>Reduce carbon emissions</u>			
	Energy efficiency and electrification from buildings (2030 goal: 365,000)	90,723	95,760	131,359
	Energy efficiency and electrification from transportation ⁷ (2030 goal: 1,000,000)	68,991	70,500	88,383
	<u>Procure Renewable Energy to achieve SMUD's Renewable Portfolio Standards requirements</u> % of SMUD's Retail Sales (Statutes require: 44% by 2024, 52% by 2027, and 60% by 2030)	35.8%	35.8%	38.5%
SD-13 Economic Development	Supplier Education and Economic Development (SEED) - Percent of Contract Dollars	20%	20%	20%

Footnotes:

- [1] 2021 Forecast is based on 2021 Actuals through September 30 and 2018-2020 for October through December. One major event occurred January 26-29th 2021. In 2021, 2 of the 4 metrics for SAIDI/SAIFI are projected to be within the Strategic Direction. The impact to SAIFI and SAIDI during the major event far exceeded the allowance provided for the major event threshold.
- [2] The Customer Satisfaction metric measures customers responding as very satisfied or satisfied with service received in the areas of New Connects, Billing Inquiries, Outbound Outage Communication, Tree Trimming, IVR One Payment or IVR Payment Arrangements.
- [3] Board target is to reach 70% by the end of 2025 and 80% by the end of 2030, with neither the average commercial customer score falling below 69%, nor the average residential customer score falling below 65% in any year. While the 2021 Forecasted VFP score is above target, we expect a negative correction in the 2022 VFP score due to the restart of shut-offs, collections, late fees and rate increases.
- [4] As of the end of September, 32 of the 37 incidents included in this metric were reported within 3 days of the supervisor being notified. The prediction is based off the performance in the last 9 months.
- [5] As of the end of September, 20 of the 31 incidents included in this metric have been investigated and completed in SITS on or before the due date. The prediction is based off the performance in the last 9 months.
- [6] 2021 Engagement Survey was deployed mid-October to early November and results are not yet available.
- [7] Currently metrics include light-duty vehicles only. Working to add Medium and Heavy Duty.

2022 Budget

Business Units & Segments and Organizational Chart



Powering forward. Together.

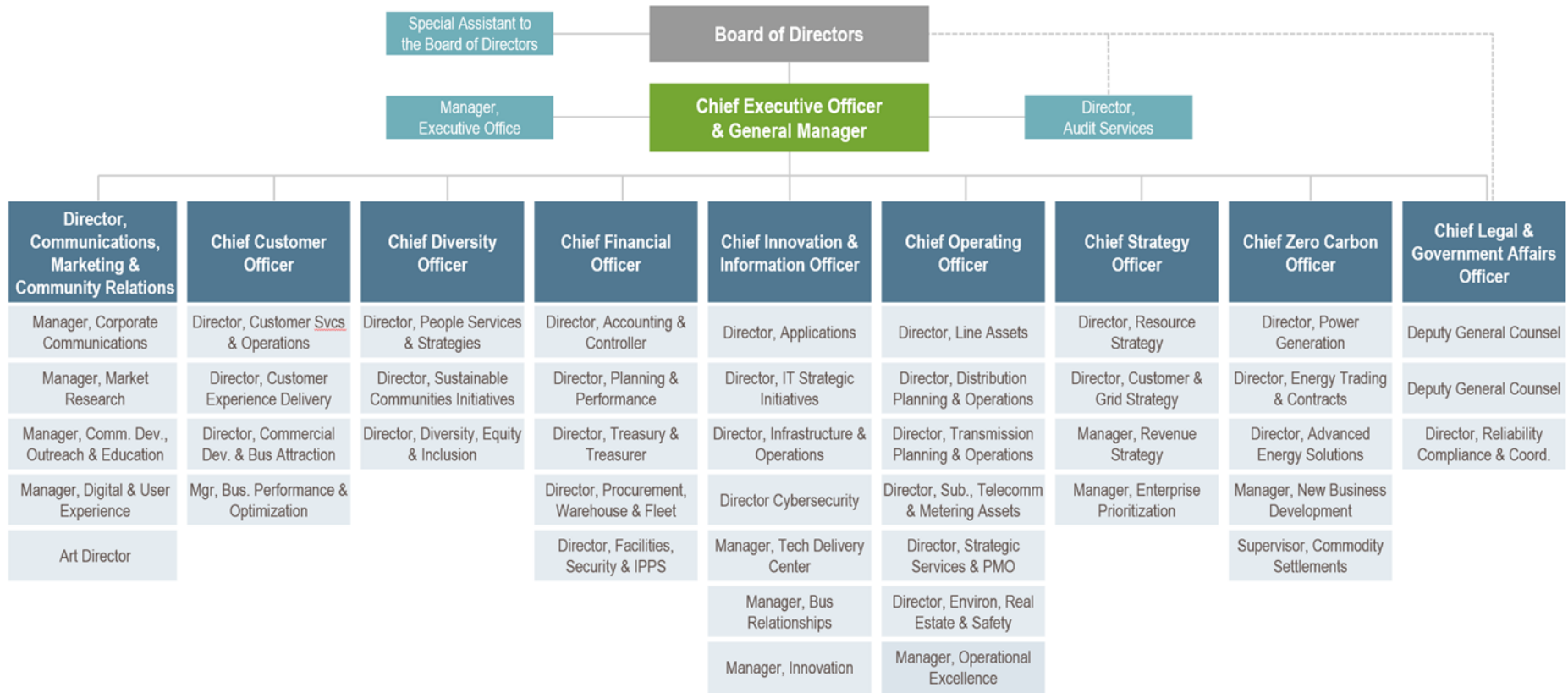


Business Units & Segments

The SMUD Budget is planned by Business Unit processes which in some cases differs from the organizational/functional reporting structure.

Customer & Community	Energy Delivery & Operations	Zero Carbon Energy Solutions	Enterprise Strategy	Workforce, Diversity & Inclusion	Technology & Innovation	Corporate/Enterprise
Customer Experience Delivery	Transmission Planning & Ops	Power Generation	Resource Strategy	People Services & Strategies	Applications	Governance
Customer Services & Operations	Distribution Planning & Ops	Advanced Energy Solutions	Revenue Strategy	Diversity, Equity & Inclusion	Infrastructure & Operations	Finance
Revenue Services & Operations	Line Assets	Commodity, Procurement & Sales	Customer & Grid Strategy	Sustainable Communities	Strategy & Innovation	Legal, Gov't Affairs & Reliability Compliance
Community Energy Services	Substation, Telecom & Network	New Business Development	Enterprise Prioritization		Strategic Initiatives	Facilities, Security & Office Services
Commercial Development & Business Attraction	Strategic Services & PMO				Cybersecurity	Procurement, Warehouse & Fleet
	Environmental, Real Estate & Safety					Comm. Marketing & Community Relations
	Operational Excellence					Enterprise Affairs

Organization Chart by Executive



Note: SMUD resources support Business Unit processes regardless of organization/functional affiliation.

2022 Budget

Economic Outlook & Assumptions

Powering forward. Together.



The planning data presented here is based on a recent update as part of the Load Forecasting process.

New customers to be added to SMUD's customer base in 2022 are projected to total approximately 4,766. This is less than a 1 percent annual growth rate, which is below the average growth during the past decade. Of the 2022 projection, 4,076 are new residential customers and 690 are other customers. Looking to the future, we are seeing regular growth in residential and commercial customers.

	2021	New	2022
	<u>Budget</u>	<u>Customers</u>	<u>Budget</u>
Residential customers	572,084	4,076	576,160
All other customers	76,148	690	76,838
TOTAL customers*	648,232	4,766	652,998

*Reflects monthly average instead of end-of-year count in order to reflect the fluctuation of SMUD's customer growth.

Inflation Escalation Factors:

The forecasted inflation factor for use where applicable in preparing the 2022 Budget is 2%. The longer-term outlook (ten years) used in the business strategy update is the same, at 2% per year.

The cost-of-living (COLA) increase for SMUD salaries and wages during 2022 is based on formulas contained in negotiated bargaining agreements.

(continued)

Energy Sales & Requirements

Description	2021 Budget	2022 Proposed	Change vs Budget
Expected System Peak (MW)	2,870	2,874	4
Expected Retail Energy Sales (GWh)	10,087	10,166	79
Expected Wholesale Sales, Distribution & Transmission Losses (GWh)	474	444	(30)
Expected Supply Requirements (GWh)	10,561	10,610	49
GENERATION			
Total SMUD Generation (GWh)	6,820	7,410	590
SMUD Generation as a % of expected supply requirement	65%	70%	5%
PURCHASED POWER			
Net Purchased Power (GWh)	3,742	3,199	(543)
Net Purchased Power as % of expected supply requirement	35%	30%	-5%
GAS			
Expected Gas Burn (NG+Biogas) for Thermal Generation and Steam Sales (mmBtu)	33,248,660	40,112,300	6,863,640
Committed Fuel (NG+Biogas) Purchases (mmBtu)	29,090,645	33,998,352	4,907,707
Committed Purchases (NG+Green Gas) as a % of Expected for Thermal Generation and Steam Sales	87%	85%	-2%
ACTUAL / FORWARD PRICES of UNCOMMITTED TRANSACTIONS			
On Peak Power Price Forecast (\$/MWh)	\$42	\$74	\$32
Off Peak Power Price Forecast (\$/MWh)	\$34	\$60	\$26
Flat Power Price Forecast (\$/MWh)	\$39	\$68	\$29
Forward Natural Gas Price Forecast (\$/mmBtu)	\$3.08	\$5.61	\$2.53

Energy sales to customers is projected to increase slightly from the 2021 Budget assumption.

Unmanaged Peak load is forecasted to increase by 4MW from the 2021 Budget assumption.

(continued)

Energy Requirements

Summary (GWh)	2021 Budget	2022 Proposed	Change vs Budget	Change vs Budget
Generation:	GWh	GWh	GWh	GWh
SMUD-Owned Large Hydro	1,503	1,252	(251)	-17%
SMUD-Owned Gas Fired	4,239	5,149	910	21%
SMUD-Owned Renewable	1,077	1,009	(68)	-6%
TOTAL - Generation	6,820	7,410	590	9%
Market Energy:	GWh	GWh	GWh	GWh
Uncommitted Sales	(2,473)	(2,898)	(425)	17%
Long-Term Contracts	4,185	4,494	309	7%
Short-Term Purchases	0	63	63	100%
Uncommitted Purchases	2,087	1,581	(506)	-24%
TOTAL - Market Transactions	3,799	3,240	(559)	-15%
Transmission Losses	(58)	(41)	17	-29%
TOTAL - Supply Requirement	10,561	10,609	48	0%

(continued)

Power Supply Assumptions

The 2030 Zero Carbon Plan is the basis for the operating assumptions for the 2022 Budget. Electricity and natural gas prices are forecasted to be higher than what was projected in the 2021 Budget. The Upper American River Project (UARP) generation will be lower, and renewable and thermal generation are forecasted to be higher than the 2021 Budget.

SMUD became a Control Area, presently called a Balancing Authority (BA), in June 2002 and since then has operated its transmission and generation system independently. On January 1, 2006, the Western Area Power Administration's Sierra Nevada Region (WAPA-SNR) was integrated into the SMUD BA, followed on December 1, 2006, by the California-Oregon Transmission Project (COTP) – a 500kV transmission line - and the Modesto Irrigation District (MID). On May 8, 2009, together with MID and the cities of Redding and Roseville, SMUD entered into a Joint Powers Agreement to create the new Balancing Authority of Northern California (BANC). With regulatory approval on May 1, 2011, the operations of SMUD BA were transferred to BANC BA. BANC uses SMUD's existing employees and physical resources to be the BANC Operator. BANC's General Manager reports to a five-person Commission made up of SMUD, MID, City of Redding, City of Roseville, and Trinity Public Utility Districts chief executives. This BA, as an independent entity, is not subject to market disruptions that result from financially induced supply shortages within the California Independent System Operator (CAISO) or investor-owned utilities. SMUD is still subject to certain CAISO transmission, grid management and other costs for transactions that use the CAISO controlled grid. These costs have been included in SMUD's 2022 Budget.

(continued)

SMUD Generation

SMUD Hydroelectric (Upper American River Project): The 2022 Budget assumes median rainfall and normal starting reservoir levels in 2022. Generation is expected to be 1,303 GWh.

Other SMUD Generation (South Fork, Chili Bar, Photovoltaic, Hedge Battery, Solano Wind): The 2022 Budget assumes average generation subject to limitations governing the operation of each plant. The largest contributor, Solano Wind is expected to generate 593 GWh.

Cosumnes Power Plant: This 570 MW gas-fired combined cycle power plant began commercial operation in February 2006. Forecasted generation from this plant in 2022 is 3,761 GWh.

Carson Cogeneration: This gas-fired cogeneration project, which began commercial operation in October 1995, consists of a 65 MW combined cycle unit and a 42 MW peaking unit. With the installation of an auxiliary steam boiler in 2017, if running the cogeneration unit is uneconomic, it can be turned off. Energy will be supplied from the auxiliary boiler instead of the cogeneration unit. The forecasted generation from this facility in 2022 is 399 GWh.

Procter & Gamble Cogeneration: This gas-fired cogeneration plant began commercial operation in March 1997. It consists of a 136 MW combined cycle power plant and a 50 MW peaking unit that became operational in May 2001. With the installation of an auxiliary steam boiler in 2016, if running the cogeneration unit is uneconomic, it can be turned off. Steam will be supplied from the auxiliary boiler instead of the cogeneration unit. Forecasted generation from this facility in 2022 is 725 GWh.

Campbell Soup Cogeneration: This gas-fired combined cycle plant, began commercial operation in December 1997. It consists of a 160 MW combined cycle power unit. Beginning in 2008 the 72 MW McClellan gas turbine is also included under SPA. Forecasted generation from these two units in 2022 is 591 GWh.

(continued)

Purchased Power

The 2022 Budget assumes delivery of energy and capacity from the following contracts:

Western Area Power Administration (WAPA) / Central Valley Project (CVP): Provide 265 MW of capacity and 661 GWh of energy. Under a separate agreement, WAPA provides 38 GWh to serve its customers located within SMUD's service territory.

Kiefer Landfill: Provide a total of 12 MW of capacity and 109 GWh of energy under two separate agreements. The original Kiefer I contract was extended in November 2014, for an additional 10 years. The current Kiefer II contract was extended in March 2016, for an additional 10 years.

MM Yolo: Provide 2.4 MW of capacity and 21 GWh of green energy under an agreement that expires in June 2026.

IBR Highwinds: Provide 50 MW of capacity and 98 GWh of energy under an agreement signed in July 2015 to extend the original contract for additional 10 years.

Grady Wind: Provide 200 MW of capacity and 803 GWh of energy of under an agreement that expires in December 2043.

enXco – Solar: Provide 1.0 MW of capacity and 2 GWh under an agreement which expires in August 2028.

Santa Cruz Landfill: Provide 1.5 MW of capacity and 12 GWh of energy under an agreement, which expires in September 2024.

Feed-in-Tariff Solar Projects: Provide 100 MW capacity and 211 GWh of energy delivered from all projects under a 20-year term ending in December 2030.

Van Warmerdam Dairy Biogas: Provide 0.5 MW of capacity and 2 GWh of energy under an agreement which expires in May 2033.

(continued)

Purchased Power (continued)

New Hope Dairy Biogas: Provide 0.4 MW of capacity and 2 GWh of energy under an agreement which expires in August 2033.

Patua (aka Gradient) Geothermal: Provide 19 MW of capacity and 147 GWh of energy under an agreement which expires in December 2033.

Loyalton Biomass: Provide 4.2 MW of capacity and 33 GWh of energy under an agreement which expires in March 2023.

Van Steyn Dairy Biogas: Provide 0.12 MW of capacity and 1 GWh of energy under an agreement which expires in June 2035.

Conergy Solar: Provide 1.3 MW of capacity and 2 GWh of energy under an agreement that expires in August 2034.

Navajo Solar: Provide 100 MW of capacity and 286 GWh of energy under an agreement that expires in December 2051.

Wildflower Solar: Provide 13 MW of capacity and 31 GWh of energy under an agreement that expires in December 2045.

Rancho Seco Solar: Rancho Seco I provides 11 MW of capacity and 22 GWh of energy under a 30-year agreement which expires in August 2036. Rancho Seco II provides 160 MW of capacity and 335 GWh of energy through November 2039.

Recurrent Solar: Provide 60 MW of capacity and 171 GWh of energy under an agreement that expires in December 2037.

Sutter Energy Center: Provide 258 MW of capacity and 1,238 GWh of energy under a three-year contract with Calpine Energy Services, L.P. effective January 2021 from a natural gas-fired, combined-cycle.

CalEnergy: Provide 30 MW of capacity and 223 GWh of geothermal energy under an agreement expiring December 2039.

(continued)

Purchased Power (continued)

The balance of energy requirements to meet forecasted sales to customers will be met by short-term purchases of energy. Some of the long-term and short-term contracts will be delivered over SMUD's 528 MW share of the California-Oregon Transmission Project (Northwest) or under the South-of-Tesla transmission agreement with PG&E (Southwest & Southern California). These purchases are coordinated through SMUD's membership in the Western Systems Power Pool (WSPP), which facilitates sales and exchanges among its 30 member utilities, and through market trading. Lastly, another 5-year extension to the WAPA Custom Product ~300-MW sale/purchase contract with WAPA allows SMUD to import additional power from California Oregon Border through 2024.

2022 Budget

Budget Summary

Powering forward. Together.



Overview

The 2022 Budget Authorization totals \$1.7 billion. This represents a decrease of \$9 million from the 2021 Budget. The 2022 Budget is a request to authorize new spending.

The 2022 SMUD Budget summarized on the following pages is a blueprint of planned operating, public goods and debt service expenses and capital expenditures for the fiscal year beginning January 1, 2022. Historical comparisons to the 2021 Budget adopted by the Board on December 10, 2020, are shown to put the 2022 Budget in perspective. A forecast of actual 2021 expenses is also shown.

The O&M and Capital Budgets are shown by Business Unit. SMUD Business Units correspond to business processes which deliver specific products and services to SMUD customers. The core business processes are represented by Customer & Community Services, Zero Carbon Energy Solutions and Energy Delivery & Operations Business Units. Included within Zero Carbon and Customer/Community are Public Good costs related to energy efficiency, low-income assistance, renewable generation and research and development. These costs are shown separately because they are designated as Public Goods programs as determined by statute.

The Enterprise Strategy, Technology & Innovation, Workforce, Diversity & Inclusion and Corporate Services Business Units provide services which enable the other business units to perform their work. The Enterprise Business Unit contains contingency and reserve estimates for the organization. The planning and budgeting philosophy is to more accurately plan and measure the total cost of SMUD business processes and set performance improvement targets for the processes and Business Units that will most efficiently accomplish strategic goals. This budgeting methodology also most efficiently allocates and plans resources throughout SMUD to the Business Units and work processes.

Within each Business Unit budget, work processes are subdivided into business segments and individual business processes. Budget detail is provided at both levels. Business segments and processes enable each business unit to effectively plan and measure performance of its operations at a manageable level.

The budgeted costs shown under each core Business Unit include all the costs of performing the work planned for 2022. These include labor costs from departments throughout SMUD which perform work in the core business processes. Labor costs include employee benefits. Also included in the budget is a surcharge allocation of service costs such as transportation, facilities, technology, human resources, safety and security. Expenditures budgeted by Technology & Innovation, Workforce, Diversity & Inclusion, Energy Delivery & Operations and Corporate Services represent those process costs that are not allocated to the core business units, such as dedicated software implementations or enhancements that do not meet minimum SMUD criteria for capitalization. The Corporate Services budget includes insurance and risk management, cash and debt management, and corporate legal, reliability compliance, legislative, regulatory and government relations, planning and performance, executive management and Board of Directors; a portion of this budget is allocated to Capital and Public Good. The Enterprise budget includes contingency and reserve estimates for the organization.

The 2022 Budget includes the following major components:

OPERATING EXPENSES (O&M): Expenses related to producing and acquiring energy, operating and maintaining the electrical delivery system, providing service to customers including public goods (energy efficiency, low-income assistance, new renewable generation sources, and research and development of advanced technologies) programs, and corporate activities. Included within this category as a separate line item are commodity costs associated with energy supply. These costs include purchased power, fuel for energy production, and transmission wheeling costs.

Also included under Zero Carbon Energy Solutions are fuel, operating and interest expense associated with SFA: Carson Cogeneration plant, Procter & Gamble plant, Campbell Soup Cogeneration plant, Cosumnes Power Plant; NCGA No. 1, and NCEA pass-through gas costs. These expenses are shown in the SMUD Budget because SMUD will reimburse SFA, NCGA No. 1 and NCEA for their costs under the terms of the Power and Gas Purchase Agreements. The detailed SFA, NCGA No. 1 and NCEA Budgets are also in separate booklets and/or resolutions as they will be approved by the SFA, NCGA No. 1 and NCEA Commissions.

CAPITAL INVESTMENT: Investment in additions and improvements to SMUD’s property, plant and equipment. The Capital Investment budget includes all qualifying costs related to acquiring or constructing tangible and intangible assets which meet SMUD’s capitalization guidelines - cost exceeding \$5,000 and an estimated service life greater than two years. SMUD follows Federal Energy Regulatory Commission (FERC) capitalization guidelines which dictate the inclusion of all direct costs (labor, employee benefits, materials, services and other) and a proportionate share of indirect costs (engineering and construction supervision and support, transportation, insurance, etc.) related to capital projects. Capital assets are depreciated on a straight-line basis over their estimated useful service life.

ALLOCATED: Costs in four business units: Technology & Innovation, Workforce, Diversity & Inclusion, Energy Delivery & Operations and Corporate Services, which enable the business units to perform work. These costs are allocated to both O&M and capital, based on the quantity of labor hours. The aggregated allocated costs are presented in the budget documentation separately as information only; the actual costs are reflected in each of the Business Unit’s budgets as the total cost of their work processes.

DEBT SERVICE: Interest expense on and principal repayments of SMUD’s outstanding long-term debt and commercial paper notes, any revenues or payments on interest rate swaps, and trustee fees and debt issuance costs. Detail is provided in the Debt Service Summary.

Description of Cost Categories

Activity Type Labor	SMUD employee labor planned to a business unit work process. Each Activity Type has a standard hourly charge-out rate that is based on work (non-leave) hours, average annual employee salaries, and includes benefits.
Materials & Equipment	Materials and equipment either issued from inventory or purchased for a specific project or task.
Dues & Publications	Dues and publications and general membership requirements to accomplish work.
General Expenditures	All services and other non-material costs not covered by other specific cost categories including training, travel, rents, leases, licenses, fees, taxes, etc.
Outside Services	The cost of outside services contracts, consultants, and outside legal service.
Advertising	The cost of advertising.
Utilities & Postage	The cost of telephones, other utilities and postage.
Insurance	The cost of property and liability insurance.
Rebates & Incentives	The cost of energy efficiency rebates and incentives.
Commodities	The cost of purchased power, wheeling, and fuel for SMUD and JPA generating plants.
Surplus/Whsl Pwr Sales	The revenue generated from selling energy which is not needed to meet SMUD retail load.
LI/LS Rate Discount	The discount given to customers who qualify for the Low Income or Medical Energy Discount (MED) rate subsidy.
Cost Reductions/Reimb	Reimbursements, cost-sharing grants, or pass-through amounts received from outside parties to reduce net costs.
Cost Center Overhead	A rate developed to recover the indirect costs of a Cost Center. Includes Activity Type labor for administration, supervision, training, and miscellaneous general expenses such as office supplies and travel. It is assessed per hour of Activity Type Labor planned directly to the work.
Surcharges	Surcharge rates developed to recover 1) an allocation of internal service costs such as transportation and technology assessed per hour of Activity Type Labor planned directly to the work, 2) the costs of procuring outside service agreements (excluding outside legal service) and cost of procuring, storing, and handling materials and equipment assessed relative to the contract amount or whether material issued from inventory or purchased specifically for a project or task, 3) miscellaneous general and administrative SMUD expenses including insurance and risk management, cash management, debt management, and other assessed to capital and public good projects based on a flat percentage of overall SMUD activity type labor.

O&M Budget Summary



Description (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
Commodity (net) [1]	463,967	440,889	440,681	(208)	0%
<i>Customer/Community (excl. PubGd)</i>	\$86,783	\$96,224	\$94,830	(\$1,394)	-1%
<i>Public Good</i>	9,874	10,557	7,661	(2,896)	-27%
Customer/Community	96,657	106,781	102,491	(4,290)	-4%
Energy Delivery & Operations	175,403	187,260	204,655	17,394	9%
<i>Zero Carbon (excl. PubGd)</i>	132,272	144,105	159,135	15,030	10%
<i>JPA Interest Expense</i>	5,332	5,332	4,773	(559)	-10%
<i>Public Good</i>	35,179	53,062	51,776	(1,286)	-2%
Zero Carbon Energy Solutions	172,783	202,499	215,684	13,186	7%
<i>Enterprise Strategy (excl. PubGd)</i>	12,788	11,943	16,861	4,919	41%
<i>Public Good</i>	447	627	609	(18)	-3%
Enterprise Strategy	13,235	12,570	17,470	4,900	39%
<i>Workforce (excl. PubGd)</i>	5,410	7,177	7,566	389	5%
<i>Public Good</i>	1,544	1,676	1,615	(61)	-4%
Workforce, Diversity & Inclusion	6,954	8,854	9,181	328	4%
Technology & Innovation	34,451	38,906	36,476	(2,430)	-6%
<i>Corporate (excl. PubGd)</i>	93,952	91,070	104,106	13,036	14%
<i>Public Good</i>	1,289	1,471	1,924	452	31%
Corporate	95,242	92,541	106,029	13,488	15%
<i>Enterprise (excl. PubGd)</i>	13,711	16,502	(9,184)	(25,686)	-156%
<i>Public Good</i>	0	700	0	(700)	-100%
Enterprise	13,711	17,202	(9,184)	(26,386)	-153%
Other Employee Benefits [2]	(969)	32,704	40,359	7,655	23%
O&M Budget Authorization	\$1,071,434	\$1,140,206	\$1,163,842	\$23,636	2%
Revenue	(70)	(25)	(25)	0	0%
O&M Net	\$1,071,364	\$1,140,181	\$1,163,817	\$23,636	2%

[1] Net of surplus sales. The 2022 Budget assumes median water year.

[2] Other Post-Employment Benefits (OPEB) and Workers Compensation - These benefits are not allocated or included as a labor expense in the Business Units. 2021 forecast includes Accounting adjustments of (\$25.5M).

O&M Budget Summary (continued)



Cost Category (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
ActivityType Labor	\$228,217	\$245,707	\$258,081	\$12,373	5%
Material & Equipment	8,342	9,614	8,453	(1,162)	-12%
Dues & Publications	5,087	6,584	6,787	203	3%
General Expenditures	35,603	52,377	13,507	(38,870)	-74%
Outside Services	145,056	148,150	184,216	36,065	24%
Advertising	3,101	3,725	3,868	143	4%
Utilities & Postage	8,033	7,716	9,219	1,503	19%
Insurance	24,300	24,228	27,200	2,972	12%
Rebates & Incentives	18,998	28,216	34,018	5,802	21%
Commodities	583,526	587,406	693,071	105,664	18%
Surplus/Whsl Pwr Sales	(108,216)	(97,957)	(201,120)	(103,164)	105%
Non-Labor Expenditures	723,829	770,060	779,217	9,157	1%
Cost Reduction/Reimb	(22,560)	(62,552)	(63,922)	(1,370)	2%
Cost Center Overhead	52,845	54,115	50,655	(3,460)	-6%
Surcharges	84,740	94,840	94,679	(161)	0%
Expenditures Subtotal	1,067,071	1,102,170	1,118,710	16,540	2%
JPA Interest	5,332	5,332	4,773	(559)	-10%
Other Employee Benefits	(969)	32,704	40,359	7,655	23%
O&M Budget Authorization [1]	\$1,071,434	\$1,140,206	\$1,163,842	\$23,636	2%
Revenue	(70)	(25)	(25)	0	0%
O&M Net	\$1,071,364	\$1,140,181	\$1,163,817	\$23,636	2%

[1] O&M Budget Authorization includes Public Good. A summary of Public Good is provided on the following page.

O&M Budget Summary (continued)



Public Good

Description (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
Energy Efficiency	\$28,523	\$35,666	\$42,975	\$7,308	20%
Residential Assistance	10,390	11,193	8,296	(2,897)	-26%
Renewables	10	724	0	(724)	-100%
Research & Development	9,411	20,511	12,314	(8,197)	-40%
Public Good Budget Authorization	\$48,334	\$68,094	\$63,585	(\$4,509)	-7%
Rate Subsidy	34,369	40,021	35,024	(4,997)	-12%
Total Public Good <i>[1], [2]</i>	\$82,703	\$108,115	\$98,609	(\$9,506)	-9%

[1] Public Good expenditures are included in SMUD O&M summary (this table is information only)

[2] Specific information is provided within Customer/Community, Zero Carbon, Workforce and Corporate sections.

O&M Budget Summary (continued)



Commodity Budget

Description (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
Purchased Power (net) ^[1]	\$286,400	\$251,152	\$215,005	(\$36,147)	-14%
Fuel for Generation	158,193	159,567	196,925	37,358	23%
Transmission	30,189	30,169	28,751	(1,418)	-5%
O&M Commodities	\$474,782	\$440,889	\$440,681	(\$208)	0%

^[1] Excludes transfer of \$10.8M from Rate Stabilization Fund.

The O&M Proposed Budget for 2022 totals \$1,164 million, which is \$23.6 million or 2 percent higher than the 2021 Budget.

Business Unit O&M:

Total Business Unit O&M, excluding Commodity and Public Good, is \$659.6 million, which is \$28.4 million higher than the 2021 Budget. The 2022 Proposed Budget includes increased mandatory spending for Vegetation Management and Wildfire Mitigation. The 2022 Budget also funds ongoing efforts for Community Initiatives, maintaining operations, and Transportation Electrification. Transportation Electrification is a critical part of our newly-adopted 2030 Zero Carbon Plan and an important part of our strategy to continue to provide a leadership role in the region's transformation to a zero-carbon future.

More detailed and specific information is provided within each Business Unit's documentation.

Public Good: Total Public Good is \$99 million, a decrease of \$9.5 million, after inclusion of rate subsidies. The Public Good Budget is \$63.6 million. The difference is because the Budget represents the cash disbursement portion of the program that requires Board authorization.

By December 2022, the number of subsidized customers is expected to be approximately 128,983. The total cost of the EAPR subsidy is budgeted at \$33 million in 2022, a decrease of \$5.4 million from 2021, and the subsidy for customers using medical equipment increased by \$0.4 million to \$2 million. Total subsidies are \$35 million.

Energy efficiency spending increased \$7.3 million. Incorporation of savings from codes and standards is included as a component of the energy efficiency portfolio to match standard industry practice going forward. The energy efficiency budget remains in line with the goal of achieving savings of 1.5% of average annual retail energy sales and reflects our goals of reaching zero carbon by 2030. Research & Development decreased \$8.2 million to \$12.3 million as funds are being diverted to energy efficiency, building electrification and transportation electrification programs.

More detailed and specific information is provided within the Customer, Zero Carbon Energy Solutions, Workforce, Diversity & Inclusion and Corporate Services Business Unit documentation.

Commodities: The Commodity budget for 2022 of \$440.7 million is \$0.2 million lower than the 2021 Budget. Purchased power is decreasing due to lower prices for a new renewable energy contract, the expiration of a higher priced contract, and power sales to market. Fuel for Generation is increasing due to low reservoir levels leading to low hydro generation coupled with an increase in gas prices. There is a slight decrease in transmission costs for TANC and WAPA. Further details on power supply information can be found on pages 17-24.

Other Employee Benefits: SMUD's Other Employee Benefits, is \$40.4 million, an increase of \$7.7 million. This item consists of the O&M portion (unfunded liability) of Other Post-Employment Benefits (OPEB) expense of \$23.6 million, \$3.7 million of workers compensation and GASB 68 accounting adjustments of \$13 million.

Capital Budget Summary

Description (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
Customer/Community	\$3,967	\$6,884	\$6,619	(\$265)	-4%
Energy Delivery & Operations	185,166	196,494	192,866	(3,628)	-2%
Zero Carbon Energy Solutions	68,068	82,736	108,405	25,669	31%
Technology & Innovation	20,278	27,327	37,245	9,918	36%
Corporate	23,522	31,363	29,777	(1,586)	-5%
Contingency & Reserve	0	46,100	(15,000)	(61,100)	-133%
Capital Budget Authorization	\$301,000	\$390,903	\$359,911	(\$30,992)	-8%
Revenue <i>[1]</i>	(587)	0	(1,106)	(1,106)	100%
Capital Net	\$300,414	\$390,903	\$358,805	(\$32,099)	-8%

[1] 2022 Proposed and 2021 Forecast revenue is a multi-year capital grant for the Upper American River Project culvert mitigation

Capital Budget Summary (continued)



Cost Category (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
ActivityType Labor	\$59,362	\$62,642	\$80,620	\$17,977	29%
Material & Equipment	56,583	72,415	78,796	6,381	9%
Dues & Publications	100	91	91	0	0%
General Expenses	29,794	68,471	(5,577)	(74,048)	-108%
Outside Services	144,828	154,510	176,129	21,620	14%
Advertising	9	0	0	0	0%
Utilities & Postage	12	3	3	0	0%
Insurance	543	659	733	74	11%
Non-Labor Expenses	231,869	296,148	250,175	(45,973)	-16%
Cost Reduction/Reimb	(34,629)	(21,870)	(28,020)	(6,150)	28%
Expenditures	256,602	336,921	302,775	(34,146)	-10%
Cost Center Overhead	16,683	18,147	17,851	(297)	-2%
Surcharges	27,715	35,835	39,285	3,450	10%
Capital Budget Authorization	\$301,000	\$390,903	\$359,911	(\$30,992)	-8%
Revenue [1]	(587)	0	(1,106)	(1,106)	100%
Capital Net	\$300,414	\$390,903	\$358,805	(\$32,099)	-8%

[1] 2022 Proposed and 2021 Forecast revenue is a multi-year capital grant for the Upper American River Project culvert mitigation

Capital: The proposed 2022 capital investment budget is \$359.9 million for planned investment in generation, transmission, distribution, buildings, vehicles, technology and other assets critical to meeting the energy needs of our customers. Proposed ongoing capital expenditures go through a rigorous evaluation and prioritization process, based on value and risk, to ensure we fund those that have the highest contribution to the Board's strategic directives.

Major capital expenditures planned in 2022 include continuing work for Station G, starting development work for additions to our wind farm with Solano Phase IV, and ongoing improvements in our UARP area as part of our hydro relicense. Programmatic capital planned in 2022 includes cable and pole replacement programs, installing new meters, and new fleet purchases. Technology investments included in the 2022 Proposed Budget are to complete the Advanced Distribution Management System (ADMS), ongoing work for Workforce Optimization, and improvements to HR systems and network communications systems with our Talent Technology Transformation (T3) project.

More detailed and specific information is provided within each Business Unit's Documentation.

Allocated Budget Summary



Description (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
Workforce, Diversity & Inclusion	\$11,299	\$12,332	\$13,224	\$892	7%
Technology & Innovation	59,939	62,378	65,432	3,054	5%
Energy Delivery & Operations	3,820	3,675	4,082	407	11%
Corporate	46,744	52,931	50,363	(2,567)	-5%
Total Allocated Budget [1]	\$121,802	\$131,316	\$133,102	\$1,786	1%

[1] Allocated Budget expenditures are included in all SMUD Business Unit O&M and Capital summaries (this table is information only)

Allocated Budget Summary (continued)



Cost Category (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	\$ Change vs Budget
ActivityType Labor	\$59,391	\$65,899	\$64,275	(\$1,624)	-2%
<i>Material & Equipment</i>	32,300	28,532	34,032	5,501	19%
<i>Dues & Publications</i>	128	113	113	(1)	-1%
<i>General Expenses</i>	300	460	545	86	19%
<i>Outside Services</i>	9,957	12,951	11,915	(1,036)	-8%
<i>Advertising</i>	32	44	56	13	29%
<i>Utilities & Postage</i>	1,433	1,844	1,883	39	2%
<i>Insurance</i>	231	317	410	92	29%
Non-Labor Expenses	44,381	44,260	48,953	4,693	11%
Cost Reduction/Reimb	(500)	(436)	(107)	329	75%
Expenditures	103,271	109,723	113,121	3,398	3%
Cost Center Overhead	14,425	15,437	14,155	(1,282)	-8%
Surcharges	4,105	6,155	5,826	(330)	-5%
Total Allocated Budget [1]	\$121,802	\$131,316	\$133,102	\$1,786	1%

[1] Allocated Budget expenditures are included in all SMUD Business Unit's O&M and Capital summaries (this table is information only)

Allocated Budget Summary (continued)



The Allocated Proposed Budget for 2022 totals \$133.1 million, which is \$1.8 million higher than the 2021 Budget. This is shown as **information only** as 100% of these allocated expenditures are included in the budget dollars of all SMUD O&M and Capital described in this documentation. Workforce, Diversity & Inclusion, Technology & Innovation, Energy Delivery & Operations and Corporate Services costs are allocated to business units based on the quantity of labor hours.

More specific and detailed information is provided within each of the previously mentioned Business Unit's sections of this documentation.

Position Count Summary



Executive Hierarchy	2021 Full-time	2021 Limited Term	2021 Part-time	2021 Positions Planned	2022 Full-time	2022 Limited Term	2022 Part-time	2022 Positions Planned	Increase/Decrease
CEO & General Manager	33	0	1	34	33	0	1	34	0
Communications, Marketing & Community Relations	63	2	3	68	64	1	3	68	0
Chief Legal & Gov't Affairs Officer	38	0	4	42	38	0	4	42	0
Chief Financial Officer	302	7	8	317	307	2	5	314	(3)
Chief Operating Officer	779	21	21	821	796	14	16	826	5
Chief Zero Carbon Officer	246	1	4	251	254	2	7	263	12
Chief Strategy Officer	41	0	6	47	46	0	2	48	1
Chief Customer Officer	278	29	105	412	296	7	104	407	(5)
Chief Diversity Officer	74	7	9	90	80	6	24	110	20
Chief Information & Innovation Officer	262	12	36	310	265	7	37	309	(1)
Enterprise Resource Pool	41	13	1	55	31	0	0	31	(24)
Full-time				2,157				2,210	53
Limited Term				92				39	(53)
Part-time				198				203	5
SMUD Total	2,157	92	198	2,447	2,210	39	203	2,452	5

Position Count: The full-time count of 2,210 is identified in the Board Resolution.

Labor Cost Summary



Executive Hierarchy (\$000)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
CEO & General Manager	\$13,478	\$15,288	\$16,567	\$1,279	8%
Chief Legal & Gov't Affairs Officer	5,736	5,797	5,892	95	2%
Chief Financial Officer	34,484	36,193	35,653	(540)	-1%
Chief Operating Officer	117,917	121,815	127,756	5,941	5%
Chief Strategy Officer	5,849	6,631	7,066	435	7%
Chief Zero Carbon Officer	31,057	29,905	37,033	7,128	24%
Chief Customer Officer	32,351	36,079	34,187	(1,892)	-5%
Chief Diversity Officer	9,546	8,882	11,402	2,520	28%
Chief Information & Innovation Officer	36,181	39,033	39,835	802	2%
Salaries & Wages*	\$264,639	\$281,710	\$295,685	\$7,167	5.0%
Overtime	\$21,961	\$17,913	\$19,706	\$1,474	10.0%
SMUD TOTAL	\$286,600	\$299,623	\$315,391	\$15,768	5.3%

*Salaries & Wages includes paid leave ----- 2021 Budget not adjusted for any organizational realignment

Labor Salaries: The labor summary reflects the cost of wages for SMUD employees. The budget for labor and associated benefit costs is included on the previous budget summary pages.

Benefits Summary

Summary (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
Active Employee Benefits	\$43,006	\$45,188	\$48,564	\$3,376	7%
Administer Benefits	2,103	2,532	2,380	(153)	-6%
Normal Cost Retirement Funding (OPEB)	0	9,597	8,290	(1,307)	-14%
Subtotal Health & Welfare	\$45,109	\$57,317	\$59,234	\$1,916	3%
FICA Contribution	21,437	22,472	23,654	1,183	5%
Retirement Contribution	119,940	71,159	68,155	(3,004)	-4%
Subtotal FICA and Retirement	\$141,377	\$93,631	\$91,809	(\$1,821)	-2%
TOTAL	\$186,486	\$150,948	\$151,043	\$95	0%

Benefits: The benefits summary reflects costs for active and retired employee benefits, the costs to administer those benefits, and FICA and retirement contributions for current staff. 2022 Proposed Budget is increasing slightly due to higher active employee benefits, offset by lower Normal Cost (OPEB) and Retirement Contribution expenses compared to 2021 Budget.

2022 Budget Debt Service

Powering forward. Together.



Debt Service Budget



The following schedules show the summary and details of the 2022 Proposed Budget for Debt Service. SMUD issues Electric Revenue Bonds and Commercial Paper Notes to finance long-lived capital assets. The Debt Service Budget includes accrued interest expense on outstanding Electric Revenue Bonds and Commercial Paper Notes, net of any swap revenues tied to debt issues, scheduled principal repayments of Bonds and Commercial Paper, trustee fees associated with administration of debt service payments, and interest expense and issuance costs associated with planned new debt issues.

Revenue Bond Interest totals \$109.2 million in the 2022 Budget, a decrease of \$4.4 million from 2021.

Commercial Paper Interest totals \$4.1 million in the 2022 Budget, an increase of \$0.3 million from 2021. Short-term interest rates assumed for 2022 are an average of 0.10%; The budget assumes an average commercial paper balance of \$100 million.

Scheduled Principal Repayments of revenue bonds and commercial paper notes total \$100.2 million in 2022, a \$2.1 million increase from 2021.

Fees/Bond Issuance Costs of \$2.3 million are included for new 2022 bond issuances and related fees.

Debt Service Budget (continued)



Debt Service (\$000s)	2021 Forecast	2021 Budget	2022 Proposed	\$ Change vs Budget	% Change vs Budget
Interest Expense ¹	\$116,297	\$117,425	\$113,294	(\$4,131)	-3%
Principal Repayments	98,040	98,040	100,150	2,110	2%
Fees/Bond Issuance Cost	794	2,079	2,310	231	191%
Total Debt Service	\$215,131	\$217,544	\$215,754	(\$1,790)	0%
Allocated to JPAs	(3,812)	(3,812)	(3,596)	216	-6%
NET DEBT SERVICE	\$211,319	\$213,732	\$212,158	(\$1,574)	0%

[1] Build America Bonds are shown gross of the rebate of \$9.3 million expected in 2022. The budget authorization is requested gross of the rebate. Includes net debt related swap payments and interest on long-term, variable rate, and subordinated debt. Assumes an interest rate of 4.34% (incl. all related fees & swaps) on avg. commercial paper balance of \$100 million.

Debt Service Budget (continued)



Date Issued	Issue	1/1/2022 Principal Balance	Issued Interest Rate	Final Maturity Date	2022 Scheduled Principal Payment	2022 Interest Expense
Electric Revenue Bonds						
Jun-97	Series K ¹	55,835	5.25% to 5.90%	2024	17,670	90
May-09	Series V ²	200,000	6.322% (4.11% net)	2036	-	12,644
Jul-10	Series W ³	250,000	6.156% (4.00% net)	2036	-	15,390
Sep-11	Series X (Refunding)	0	1.50% to 5.00%	2028	-	0
Jan-12	Series Y (Refunding)	163,765	3.00% to 5.00%	2033	5,980	7,935
May-13	Series A	132,020	3.75% and 5.00%	2041	-	6,592
May-13	Series B (Refunding)	81,880	3.00% to 5.00%	2033	60	3,996
Jul-16	Series D (Refunding)	124,160	5.00%	2028	20,100	5,715
Dec-17	Series E (Refunding)	132,870	3.00% to 5.00%	2028	21,285	6,241
Aug-18	Series F (Refunding)	127,645	5.00%	2028	24,400	5,921
Apr-19	Series G	191,875	5.00%	2041	-	9,352
May-20	Series H	400,000	4.00% to 5.00%	2050	-	18,699
Jul-21	Series I ⁴ (Refunding)	106,875	5.00%	2028	10,655	5,142
Jul-22	Series J	157,785	2.06%	2032	-	1,451
	Subtotal	<u>1,966,925</u>			<u>100,150</u>	<u>99,170</u>
Subordinated Electric Revenue Bonds						
Jul-19	Series A	100,000	5%	2049	-	5,000
Jul-19	Series B	100,000	5%	2049	-	5,000
	Subtotal	<u>200,000</u>			<u>-</u>	<u>10,000</u>
	Total Outstanding Bonds	<u>2,166,925</u>	Principal & Interest Payments		<u>100,150</u>	<u>109,170</u>
	Total Debt Service				<u>100,150</u>	<u>109,170</u>

1) Swapped to a variable rate for the life of the debt, interest expense net of swap payment. Interest expense without swap would be \$2,467,500.

2) Interest expense gross of federal government Build America Bond rebate of \$4,173,152.

3) Interest expense gross of federal government Build America Bond rebate of \$5,079,470.

4) Forecasted debt service based on 2012Y refunding