SACRAMENTO MUNICIPAL UTILITY DISTRICT
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INDEPENDENT AUDITORS' REPORT

To the Board of Directors of
Sacramento Municipal Utility District
Sacramento, California

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of Sacramento Municipal Utility District and its blended component units, which comprise the Consolidated Statements of Net Position as of December 31, 2016 and 2015, and the related Consolidated Statements of Revenues, Expenses and Changes in Net Position, and Consolidated Statements of Cash Flows for the years then ended and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control over financial reporting relevant to the Sacramento Municipal Utility District's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Sacramento Municipal Utility District's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Sacramento Municipal Utility District and its blended component units at December 31, 2016 and 2015, and the changes in their financial position and their cash flows for the years then ended, in accordance with accounting principles generally accepted in the United States of America.

To the Board of Directors of
Sacramento Municipal Utility District

Emphasis of Matter

As discussed in Note 3, the Sacramento Municipal Utility District has adopted the provisions of GASB Statement No. 72, *Fair Value Measurement and Application,* and GASB Statement No. 82, *Pension Issues – an Amendment of GASB Statements No. 67, No. 68, and No. 73* effective January 1, 2015. Accordingly, the accounting changes have been retroactively applied to prior periods presented. Our opinion is not modified with respect to this matter.

Other Matter

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and Schedule of Funding Progress information as listed in the table of contents be presented to supplement the financial statements. Such information, although not a part of the consolidated financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the consolidated financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the consolidated financial statements, and other knowledge we obtained during our audit of the consolidated financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we will also issue a report on our consideration of Sacramento Municipal Utility District's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Sacramento Municipal Utility District's internal control over financial reporting and compliance.

Baker Tilly Virchow Krause, LLP

Madison, Wisconsin
February 17, 2017

Sacramento Municipal Utility District
Management's Discussion and Analysis
(Unaudited)

Using this Financial Report

This annual financial report for Sacramento Municipal Utility District (SMUD) consists of management's discussion and analysis and the consolidated financial statements, including notes to the financial statements. The Consolidated Financial Statements consist of the Statements of Net Position, the Statements of Revenue, Expenses and Changes in Net Position and the Statements of Cash Flows.

SMUD maintains its accounting records in accordance with Generally Accepted Accounting Principles for proprietary funds as prescribed by the Governmental Accounting Standards Board (GASB). SMUD's accounting records generally follow the Uniform System of Accounts for Public Utilities and Licensees prescribed by the Federal Energy Regulatory Commission (FERC), except as it relates to accounting for contributions of utility property in aid of construction.

Overview of the Financial Statements

The following discussion and analysis of the financial performance of SMUD provides an overview of the financial activities for the years ended December 31, 2016 and 2015. This discussion and analysis should be read in conjunction with the consolidated financial statements and accompanying notes, which follow this section.

The Consolidated Statements of Net Position provide information about the nature and amount of resources and obligations at a specific point in time.

The Consolidated Statements of Revenues, Expenses and Changes in Net Position report all of SMUD's revenues and expenses for the periods shown.

The Consolidated Statements of Cash Flows report the cash provided and used by operating activities, as well as other cash sources, such as investment income and debt financing, and other cash uses such as payments for debt service and capital additions.

The Notes to Consolidated Financial Statements provide additional detailed information to support the financial statements.

Nature of Operations

Under provisions of California's Municipal Utility District Act, the citizens of Sacramento voted in 1923 to form their own electric utility – SMUD. The independently run community-owned utility began operations on December 31, 1946 and is not subject to regulation or oversight by the California Public Utilities Commission. It is now the sixth largest community-owned electric utility in the nation.

Governed by an elected board of directors (Board), SMUD has the rights and powers to fix rates and charges for commodities and services it furnishes, incur indebtedness, and issue bonds or other obligations. SMUD is responsible for the acquisition, generation, transmission and distribution of electric power to its service area with a population of approximately 1.4 million – most of Sacramento County and small adjoining portions of Placer and Yolo Counties. Its purpose is to provide solutions for meeting customers' electrical energy needs with a vision of empowering customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve the region.

The Board has independent authority to set SMUD's rates and charges. Changes in rates require a public hearing and formal action by the Board. In August 2013, the Board approved a 2.5 percent rate increase effective January 1, 2014, and an additional 2.5 percent rate increase effective January 1, 2015. The rate increases were designed to achieve a fixed charge ratio of at least 1.5. In July 2015, the Board approved another 2.5 percent rate increase for both 2016 and 2017 to allow for additional investments in technology and infrastructure. The Board also approved an optional residential Time of Use (TOU) rate that would be made available in 2016 and 2017 and declared its intent to make TOU rates the standard for residential customers in 2018. The TOU rate structure puts SMUD at the industry forefront by setting the stage to better align rates with the actual cost of electricity. Even with these increases, SMUD's rates continue to remain amongst the lowest in the state. In 2016, the average system rate was 29.2 percent below the nearest investor owned utility's average rate.

SMUD's vision is to be the trusted partner with its customers and the community, providing innovative solutions to ensure energy affordability and reliability, improve the environment, reduce our region's carbon footprint, and enhance the vitality of our community. SMUD's business strategy focuses on serving its customers in a progressive, forward looking manner, addressing current regulatory and legislative issues and potential competitive forces. This includes ensuring financial stability by establishing rates that provide acceptable cash coverage of all fixed charges on a consolidated basis, taking into consideration the impact of capital expenditures and other factors on cash flow.

Financial & Operational Highlights

In 2016, SMUD continued working toward realizing the vision of meeting increased customer expectations and improving operational efficiencies. SMUD launched its 5-year strategic plan which is the blueprint for transforming the new business model and also developed the Distributed Energy Resource strategy which provides guidance for technology investments for success in the changing utility environment. SMUD continues to experience the strongest bond ratings in almost 30 years by having its credit rating confirmed at AA- by all three major rating agencies. In addition to exceeding the fixed debt service coverage goal, the refunding of a portion of SMUD's bonds and locking in lower interest rates for additional debt to be refunded in 2018 produced significant long-term savings exceeding $50.0 million. SMUD was recognized by its residential customers as the top California utility for the 15th consecutive year by J.D. Power and was again ranked first among midsize utilities in the West and No. 1 in California for the 11th consecutive year for business customer satisfaction. In addition, SMUD ranked first nationally in the large utility category for Corporate Citizenship and Belief of Supporting Local Development. The White House recognized SMUD for its "strong commitment to reducing greenhouse gas emissions in all of its operations, including a net long-term reduction of 90 percent from our 1990 levels by 2050." The Senate Bill (SB)-1 program was fully subscribed in 2016 which provides for 4,400 residential solar PV interconnections and 50 commercial PV systems with over 30 megawatts (MW) of customer-sited PV. SMUD's reliability compliance risk management program continued to receive external recognition, earning SMUD the privilege of being part of the Western Electricity Coordinating Council's Self-Logging Program for 2016 and 2017, trusting SMUD to manage oversight internally for most compliance matters. Development of the 10.88 MW Rancho Seco Solar Project was completed and will supply renewable energy for the commercial SolarShares program. The SolarShares program supports the 20-year agreement with the Sacramento Kings and the California Department of General Services, as well as CalTrans. Electricity from SolarShares will displace about 2,000 metric tons of CO_2 emissions per year, which is the equivalent of taking about 400 cars off the road. Other accomplishments include hosting the first of its kind Tiny House Competition for college and university students to help cultivate the next generation of energy leaders and offering the first paid course at the state-accredited training facility, the Sacramento Power Academy. Through its economic development program, SMUD played a key role in the attraction, retention and expansion of several companies in its service territory which led to the creation of over 1,600 jobs.

In July 2014, FERC issued a new fifty year license for the Upper American River Project (UARP), which included authority to build the Iowa Hill pumped-storage project. The UARP consists of three relatively large storage reservoirs and eight powerhouses containing eleven turbines. The UARP is one of SMUD's lowest cost power sources. In addition to providing clean hydroelectric power and operational flexibility, it 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 673 MW and represents about 15 percent of SMUD's average annual retail energy requirements. The Iowa Hill pumped-storage project was a proposed 3 unit, 400 MW variable speed powerhouse and in December 2015, after much analysis, SMUD made the decision to terminate the Iowa Hill pumped-storage project as it was determined to no longer be financially feasible (Board approved February 2016). SMUD's other power generation facilities include 3 MW of solar photovoltaic installations, the 102 MW Solano Wind Project, and five local gas-fired power plants with total capacity of approximately 1,012 MW. In addition, SMUD has several power purchase agreements to help meet its remaining power requirements.

As part of the hydro relicensing process, SMUD entered into long-term contracts to provide certain services to four different government agencies – U.S. Department of Interior Bureau of Land Management, U.S. Department of Agriculture Forest Service, El Dorado County, and the California Department of Parks and Recreation. The aggregate present value of all contract payments of $57.8 million was recorded as a liability at December 31, 2016.

While some effects of the long-term drought remain in California, SMUD had near normal snowfall and above average rainfall in its UARP watershed in 2016. A Hydro Rate Stabilization Fund (HRSF) was established to help absorb higher energy costs when hydroelectric production is down and to serve as a buffer against unexpected financial developments. In April 2015, $3.1 million was transferred from the HRSF as a result of the effect of the drought, which brought the balance of the HRSF to zero. Accordingly, SMUD applied an automatic 12-month Hydro Generation Adjustment (HGA) surcharge of 1.3 percent to its customer's electric bills. In April 2016, $10.0 million was transferred to the HRSF as a result of higher precipitation and the HGA was removed. The $10.0 million balance in the HRSF at December 31, 2016 is an indicator of the significant impact of the rainfall and snowfall in 2016 as compared to just a year ago when the reserves were depleted as a result of the drought.

SMUD also has a long-term agreement with the Western Area Power Administration (WAPA) to purchase power generated by the Central Valley Project, a series of federal hydroelectric facilities operated by the U.S. Bureau of Reclamation. SMUD uses a Rate Stabilization Fund (RSF) to offset any excess or deficits in WAPA energy deliveries. In 2016 and 2015, WAPA's deliveries fell short which resulted in a $5.1 million and $12.0 million transfer from the RSF, respectively. At December 31, 2016 and 2015, the balance of the RSF was $25.2 million and $30.3 million, respectively.

Decommissioning

During 2014, SMUD made significant progress toward completing the Decommissioning Plan for its Rancho Seco nuclear facility, which was shut down in 1989. The plan consists of two phases that allow SMUD to terminate its possession-only license. Phase I of the decommissioning was completed at the end of 2008. Phase II consists of a storage period for the Class B and Class C radioactive waste overseen by the existing facility staff, followed by shipment of the waste for disposal, and then complete termination of the possession-only license. SMUD also established and funded an external decommissioning trust fund as part of its assurance to the Nuclear Regulatory Commission (NRC) to pay for the cost of decommissioning. In September 2013, SMUD entered into a contract with the operator of a low-level radioactive waste facility located in Andrews, Texas. Shipment of the previously stored Class B and Class C radioactive waste was completed in November 2014. The disposal and shipment costs totaling over $22.0 million were funded from the decommissioning trust fund. The remaining Phase II decommissioning activities that will lead to termination of the possession-only license began during 2015 and was completed in early 2017. The Accrued Decommissioning balance in the Consolidated Statements of Net Position includes $148.0 million and $150.4 million for costs related to Rancho Seco as of December 31, 2016 and 2015, respectively.

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 constructed by SMUD and licensed separately by the NRC. The U.S. Department of Energy (DOE), under the Nuclear Waste Policy Act of 1982, was responsible for permanent disposal of used nuclear fuel and GTCC radioactive waste and SMUD contracted with the DOE for removal and disposal of that waste. In 1998, SMUD filed a suit against the DOE for breach-of-contract because the DOE never provided a permanent waste disposal site. In February 2015, SMUD received $22.5 million from the U. S. Court of Claims for the period 2004 through 2009. In June 2015, SMUD filed a suit against DOE for costs incurred from 2010 through at least June 2015.

Employee Relations and Benefits

Effective January 1, 2013, SMUD began operating under a new five year memorandum of understanding (MOU) with both of its collective bargaining units, the International Brotherhood of Electrical Workers Local Union 1245 and the Organization of SMUD Employees.

SMUD participates in the California Public Employees' Retirement System (PERS), an agent multiple-employer public employee defined benefit pension plan. In 2015, SMUD implemented GASB Statement of Governmental Accounting Standards (SGAS) 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 liability (i.e., the difference between the total pension liability and the pension plan's net position or market value of assets) in its Consolidated Statements 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 also separates financial reporting from funding requirements for pension plans. Prior to this new guidance, a liability was recognized only to the extent that contributions made to the plan were less than the actuarially calculated contributions. At December 31, 2016 and 2015, the Net Pension Liability was $499.2 million and $381.3 million, respectively. SMUD elected to follow accounting for regulated operations under GASB SGAS No. 62 ***"Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements"*** (GASB No. 62) and recorded a regulatory asset as of December 31, 2014, in the amount of $425.7 million to account for the net effect of required prior period adjustments to recognize the net pension liability. Amortization of the regulatory asset will begin in 2018 over a period of 25 years.

SMUD provides postemployment healthcare benefits (OPEB) to all employees who retire from SMUD, and their dependents, in accordance with SMUD policy and MOUs. These benefits are funded through the PERS California Employer's Retiree Benefit Trust, an agent multiple-employer plan. SMUD opted to make additional $17.9 million and $22.0 million contributions to the trust in 2016 and 2015, respectively. At June 30, 2016, the plan was 59.7 percent funded and the balance of the OPEB asset at December 31, 2016 and 2015 was $127.9 million and $96.1 million, respectively.

Developments in the Energy Market

New developments in the energy market at both the federal and state level kept SMUD on high alert as it continued to monitor and address the potential impacts on the organization. Legislation at the federal level includes the Executive Order "Improving Critical Infrastructure Security" on cyber security, the Energy Policy Act of 1992 related to federal regulation of transmission access that includes FERC Order 1000, the North American Electric Reliability Corporation reliability standards, anti-market manipulation rules, and greenhouse gas emissions. Legislation at the state level includes Assembly Bill 32 Global Warming Solutions Act of 2006 (AB 32) establishing the cap-and-trade program for carbon allowances, SB-1 solar program, SB-2 1X the California Renewable Energy Resources Act that codifies the Renewable Portfolio Standards target, and SB-350 Clean Energy and Pollution Reduction Act of 2015, further defined the renewable portfolio standards.

Significant Accounting Policies

In accordance with GASB No. 62, the Board has taken regulatory actions for ratemaking that result in the deferral of expense and revenue recognition. These actions result in regulatory assets and liabilities. SMUD has regulatory assets that cover costs related to decommissioning, derivative financial instruments, SB-1 solar investments, debt issuance costs, and pension costs. As of December 31, 2016 and 2015, total regulatory assets were $598.4 and $623.3, respectively. SMUD also has regulatory credits that cover costs related to contributions in aid of construction, the RSF and HRSF, Energy Assistance Program Rate (EAPR) reserves, SB-1, grant revenues, and Transmission Agency of Northern California operations costs. As of December 31, 2016 and 2015, total regulatory credits were $370.2 million and $353.8 million, respectively.

FINANCIAL POSITION

CONDENSED CONSOLIDATED STATEMENTS OF NET POSITION

	December 31,		
	2016	2015 (Restated)*	2014*
	(millions of dollars)		
Assets			
Electric Utility Plant - net	$ 3,345	$ 3,324	$ 3,332
Restricted and Designated Assets	57	47	137
Current Assets	1,084	1,021	1,062
Noncurrent Assets	1,188	1,236	1,245
Total Assets	$ 5,674	$ 5,628	$ 5,776
Deferred Outflows of Resources	279	263	219
Total Assets and Deferred Outflows of Resources	$ 5,953	$ 5,891	$ 5,995
Liabilities			
Long-Term Debt - net	$ 2,504	$ 2,674	$ 2,882
Current Liabilities	630	650	661
Noncurrent Liabilities	840	766	682
Total Liabilities	$ 3,974	$ 4,090	$ 4,225
Deferred Inflows of Resources	645	663	757
Net Position			
Net Investment in Capital Assets	816	658	485
Restricted	77	71	127
Unrestricted	441	409	401
Total Liabilities, Deferred Inflows of Resources, and Net Position	$ 5,953	$ 5,891	$ 5,995

*See Note 3 of the financial statements for discussion on the restatement of the December 31, 2015 Consolidated Statement of Net Position. 2014 data was not restated.

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES

Electric Utility Plant - net

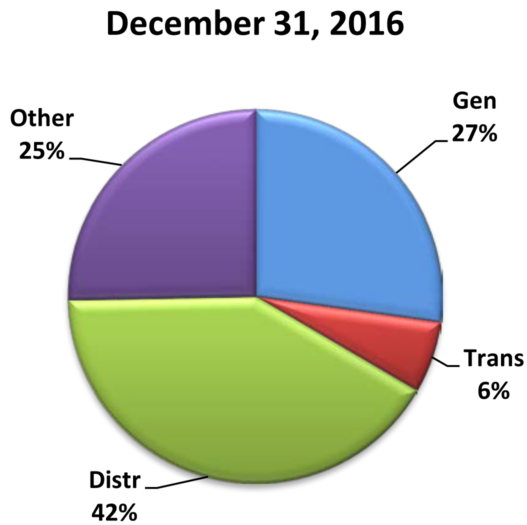
2016 compared to 2015

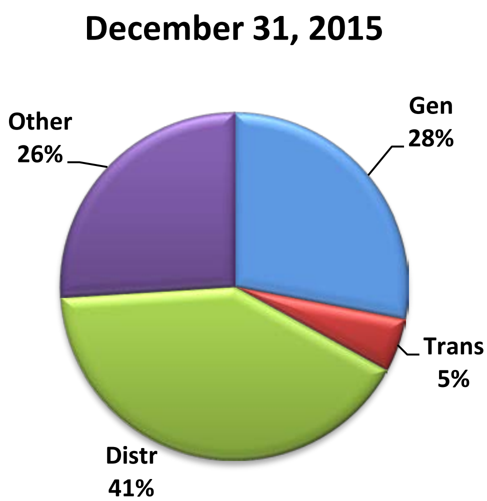
As of December 31, 2016, SMUD has invested approximately $3,345.0 million in electric utility plant assets and construction work in progress (CWIP) net of accumulated depreciation. Electric Utility Plant - net makes up about 56 percent of SMUD's Total Assets and Deferred Outflow of Resources, which is similar to 2015. In 2016, SMUD capitalized approximately $173.1 million of additions to electric utility plant in the Consolidated Statements of Net Position. The additions were primarily due to distribution line work, major overhauls in the JPAs and purchases related to the replacement of bulk substations. These additions were offset by the retirement of communication equipment, fleet assets, and hardware equipment.

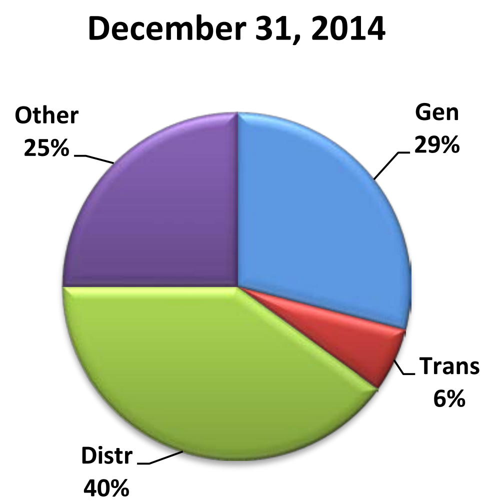
2015 compared to 2014

As of December 31, 2015, SMUD has invested approximately $3,324.0 million in electric utility plant assets and construction work in progress (CWIP) net of accumulated depreciation. Electric Utility Plant - net makes up about 56 percent of SMUD's Total Assets and Deferred Outflow of Resources, which is about four percent less than 2014. In 2015, SMUD capitalized approximately $123.0 million of additions to electric utility plant in the Consolidated Statements of Net Position. The additions were primarily due to distribution line work and purchases related to the replacement of bulk substations. These additions were offset by the retirement of a portion of SMUD's headquarters building in preparation for a major renovation, some fleet assets, and some hardware equipment.

The following charts show the breakdown of Electric Utility Plant - net by major plant category – Generation (Gen), Transmission (Trans), Distribution (Distr), and Other:







Restricted and Designated Assets

2016 compared to 2015

SMUD's restricted and designated assets are comprised of debt service reserves, nuclear decommissioning trust funds, rate stabilization reserves, and other third party agreements or Board actions, less the current portion. These assets increased $9.3 million during 2016. The increase was due to a net transfer of $4.9 million to the RSF (including the HRSF) as a result of higher precipitation and lower energy deliveries from WAPA, an increase of $2.5 million in both the revenue bond and debt service reserves and other funds, and a decrease of $1.9 million in current portion.

2015 compared to 2014

SMUD's restricted and designated assets are comprised of debt service reserves, nuclear decommissioning trust funds, rate stabilization reserves, and other third party agreements or Board actions, less the current portion. These assets decreased $89.5 million during 2015. The decrease was due to a transfer of $15.1 million from the RSF (including the HRSF) as a result of lower precipitation and lower energy deliveries from WAPA, and a $16.2 million reduction in revenue bond and debt service reserves. In addition, there was a decrease of $57.5 million in the other funds due to the release of various restricted funds of the component units, Sacramento Municipal Utility District Financing Authority (SFA) and Sacramento Power Authority (SPA), as a result of SFA's bond refunding and SPA's bond redemptions.

Current Assets

2016 compared to 2015

Current assets increased $63.7 million in 2016. The unrestricted investments increased by $101.7 million, along with a total increase of $6.9 million in receivables - net and prepaid gas to be delivered in one year. This increase was offset by total decreases of $23.2 million in unrestricted cash and cash equivalents, regulatory costs to be recovered in one year, inventories, and prepayments, along with a decrease of $20.5 million in credit support collateral deposits.

2015 compared to 2014

Current assets decreased $41.1 million in 2015. The unrestricted cash and cash equivalents and investments decreased by $78.9 million. This decrease was offset by increases in credit support collateral deposits of $19.7 million, along with a total increase of $18.3 million in receivables - net, inventories, prepaid gas to be delivered within one year, and prepayments.

Noncurrent Assets

2016 compared to 2015

Total noncurrent assets decreased $47.4 million. There were reductions in regulatory costs for future recovery, prepaid gas, prepaid power and capacity, energy efficiency loans - net and credit support collateral deposits of $80.6 million offset by increases in due from affiliated entity and prepayments and other of $34.3 million.

2015 compared to 2014

Total noncurrent assets decreased $9.5 million mainly due to a decrease in prepaid gas of $27.8 million, offset by a $21.8 million increase in credit support collateral deposits.

Deferred Outflows of Resources

2016 compared to 2015

Total deferred outflows of resources increased $15.9 million due to a total of $90.6 million increase in deferred pension outflows and amortization of bond losses, offset by a decrease of $74.7 million in the value of hedging derivative instruments.

2015 compared to 2014

Total deferred outflows of resources increased $44.2 million due to a $47.9 million increase in the value of hedging derivative instruments and deferred pension outflows, offset by $3.7 million amortization of bond losses.

LIABILITIES AND DEFERRED INFLOWS OF RESOURCES

Long-Term Debt - net

2016 compared to 2015

In June 2016, SMUD issued $149.9 million of 2016 Series D Electric Revenue Refunding Bonds. Proceeds from the 2016 Series Bonds were used to refund $125.4 million of the outstanding 2008 Series U Bonds, and $43.6 million of outstanding 2011 Series X Bonds, through a legal defeasance, and accordingly, the liability for the defeased bonds has been removed from Long-Term Debt in the Consolidated Statements of Net Position. The refunding resulted in the recognition of a deferred accounting loss of $12.6 million, which is being amortized over the life of the refunding issue. The 2016 refunding reduced future aggregate debt service payments by $27.2 million and resulted in a total economic gain of $23.4 million, which is the difference between the present value of the old and new debt service payments.

In October and November of 2016, SMUD completed transactions to convert all of the outstanding 2008 Series J, 2008 Series K, 2012 Series L, and 2012 Series M Bonds to direct placements, totaling $341.9 million (see Note 10). As part of each transaction, new bonds were issued to defease the old bonds, and as a result, the reimbursement agreements with Bank of America, State Street, and US Bank were terminated. The scheduled principal payments remain unchanged unless the bonds aren't successfully remarketed at the end of the term. Accordingly, SMUD has recorded such bonds as Long-Term Debt, less amounts due within one year in the Consolidated Statements of Net Position. No additional deferred gain or loss or economic gain resulted from these transactions.

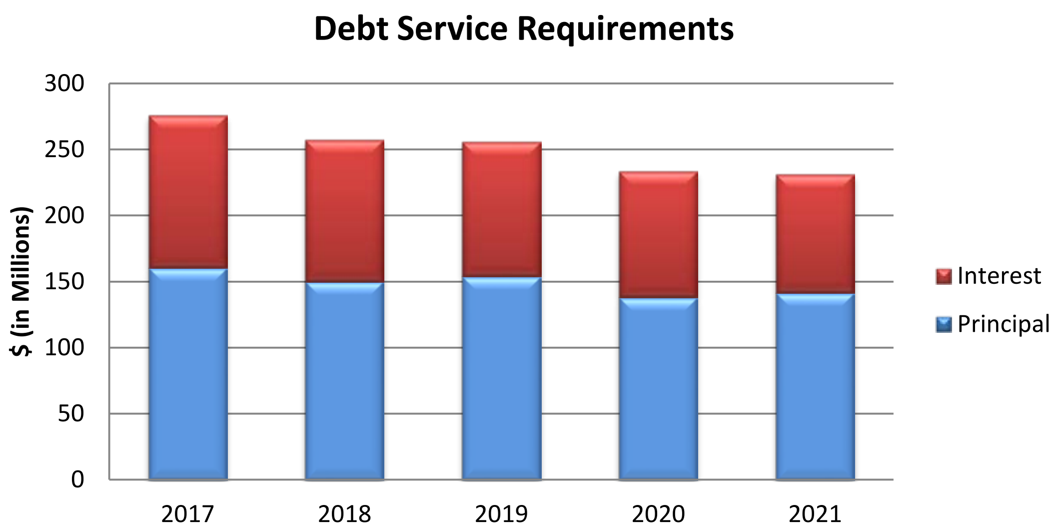
2015 compared to 2014

SMUD's long-term debt includes the component units' debt and consists of a variety of financial instruments, including interest rate swap agreements, subordinated electric revenue bonds and variable rate bonds. Proceeds from the bonds provide financing for various capital improvement projects, component unit capital projects, and the prepayment of a 20 year supply of natural gas.

In June 2015, SFA issued $193.3 million of 2015 Series Cosumnes Project Revenue Refunding Bonds. Proceeds from the 2015 Series Bonds and $24.8 million of available funds were used to refund $233.2 million of the outstanding 2006 Series Bonds through a legal defeasance, and accordingly, the liability for the defeased bonds was removed from Long-Term Debt in the Consolidated Statements of Net Position. The refunding resulted in the recognition of a deferred accounting loss of $4.4 million, which is being amortized over the life of the refunding issue, and a current period loss of $0.03 million which is included in Interest on Debt in the Consolidated Statements of Revenues, Expenses and Changes in Net Position. As a result of the refunding, future aggregate debt service payments are reduced by $46.7 million and there is a total economic gain of $35.5 million.

In January and July 2015, SPA redeemed $29.9 million and the remaining $41.4 million, respectively, of the 2005 Series Bonds maturing July 2015 through July 2022, along with the accrued interest. The redemptions resulted in a current accounting loss of $0.2 million, which is included in Interest on Debt in the Consolidated Statements of Revenues, Expenses and Changes in Net Position.

The following table shows SMUD's future debt service requirements through 2021 as of December 31, 2016:



As of December 31, 2016, SMUD's bonds had an underlying rating of "AA-" from Standard & Poor's, "AA-" from Fitch, and "Aa3" from Moody's.   Some of SMUD's bonds are insured and are rated by the rating agencies at the higher of the insurer's rating or SMUD's underlying rating.

Current Liabilities

2016 compared to 2015

Current liabilities decreased $19.8 million during 2016. The difference is mainly due to decreases in investment and hedging derivative instruments maturing within one year of $43.0 million, offset by increases in long-term debt due within one year and customer deposits and other totaling $24.1 million.

2015 compared to 2014

Current liabilities decreased $11.8 million during 2015. Current portion of long-term debt decreased $18.4 million and accounts payable decreased $6.7 million, offset by an increase of $13.5 million in hedging derivative instruments maturing within one year.

Noncurrent Liabilities

2016 compared to 2015

Noncurrent liabilities increased $74.3 million during 2016. The increase was mainly due to a $117.9 million increase in the net pension liability, offset by a $47.5 million decrease in investment and hedging derivative instruments.

2015 compared to 2014

Noncurrent liabilities increased $84.8 million during 2015. The increase was mainly due to a $54.6 million increase in the net pension liability and a $33.6 million increase in investment and hedging derivative instruments.

Deferred Inflows of Resources

2016 compared to 2015

Total deferred inflows of resources decreased $17.9 million due to a $22.4 million reduction in deferred pension inflows and $10.6 million for Solano Phase 3 wind facilities. These reductions were offset by a $16.4 million increase in regulatory credits due to a $4.9 million net transfer to the rate stabilization funds as a result of higher precipitation and lower energy deliveries from WAPA, and a $10.0 million reserve for future expenditures for energy efficiency programs for EAPR customers.

2015 compared to 2014

Total deferred inflows of resources decreased $94.6 million mainly due to a $63.8 million reduction in deferred pension inflows. Other reductions include $15.1 million in regulatory credits for transfers from the rate stabilization funds as a result of lower precipitation and lower energy deliveries from WAPA, and $10.2 million for the Solano Phase 3 wind facilities.

RESULTS OF OPERATIONS

CONDENSED CONSOLIDATED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

	December 31,		
	2016	2015 (restated)*	2014*
	(millions of dollars)		
Operating revenues	$ 1,495	$ 1,479	$ 1,529
Operating expenses	(1,240)	(1,271)	(1,320)
Operating income	255	208	209
Other revenues	43	35	79
Interest charges	(103)	(113)	(122)
Change in net position	195	130	166
Net position - beginning of year	1,139	1,009	847
Net position - end of year	$ 1,334	$ 1,139	$ 1,013

*See Note 3 of the financial statements for discussion on the restatement of the December 31, 2015 Consolidated Statement of Revenue, Expenses and Changes in Net Position. 2014 data was not restated.

Operating Revenues

2016 compared to 2015

Operating revenues decreased $16.1 million in 2016 mainly due to higher retail revenues of $29.2 million offset by a $10.0 million deferral for public good. As of December 31, 2016, the number of customers remained flat at 626,460.

In 2016, SMUD transferred $5.1 million from the RSF and $10.0 million to the HRSF. In 2015, transfers from both the RSF and HRSF were made in the amounts of $12.0 million and $3.1 million, respectively. The 1.3 percent HGA surcharge that was implemented in 2015 was removed from customers' billings in 2016 as a result of higher precipitation.

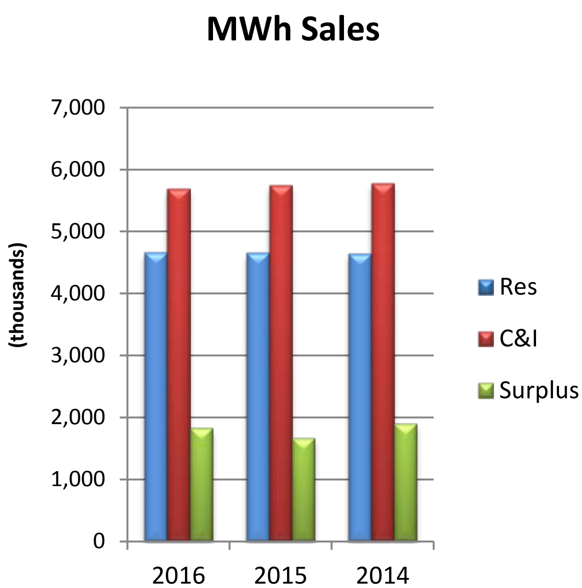
Wholesale revenues are comprised of both surplus gas and energy sales which are part of the operational strategy in managing fuel and energy costs. In 2016, surplus gas sales were lower than 2015 by $55.2 million due to lower gas prices and less gas sold. Energy sales were higher in 2016 by $7.2 million as compared to 2015 due to higher prices and higher energy sales.

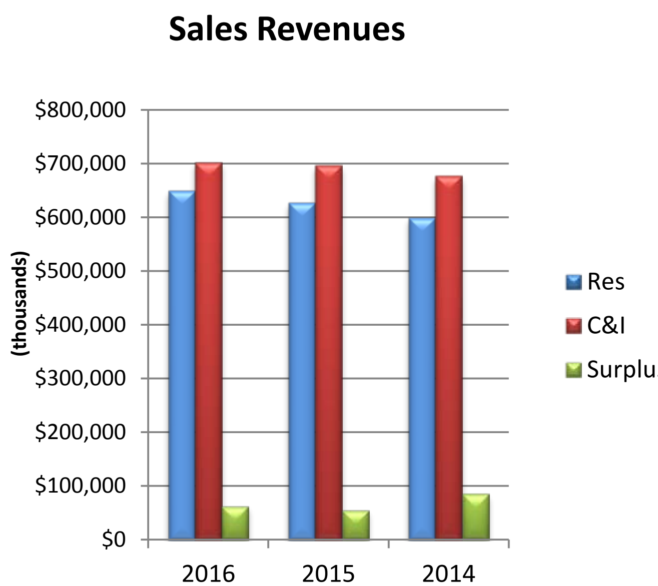
2015 compared to 2014
Operating revenues decreased $50.6 million in 2015. Approximately $47.2 million from retail sales includes the 2.5 percent rate increase that went into effect January 1, 2015. As of December 31, 2015, the number of customers increased to 621,990 at a slightly higher average revenue per kilowatt hour as compared to the end of 2014.

In 2015 and 2014, SMUD transferred $12.0 million and $11.8 million from the RSF and $3.1 million and $24.3 million from the HRSF, respectively. The transfer from the HRSF caused the fund to be depleted and subsequently the 1.3 percent HGA surcharge was implemented.

Wholesale revenues are comprised of both surplus gas and energy sales which are part of the operational strategy in managing fuel and energy costs. In 2015, surplus gas sales were lower than 2014 by $55.2 million due to lower gas prices and less gas sold. Energy sales were also lower in 2015 by $29.0 million as compared to 2014 due to lower prices and lower energy sales.

The following charts show the megawatt hour (MWh) sales, and sales revenue for the past three years by surplus energy sales (Surplus), commercial and industrial (C&I) and residential (Res) customers:



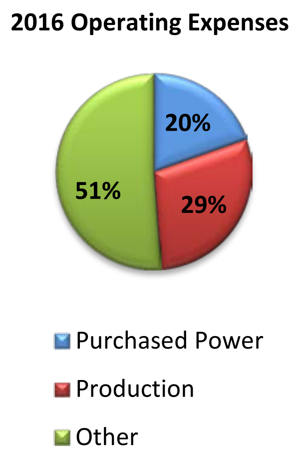


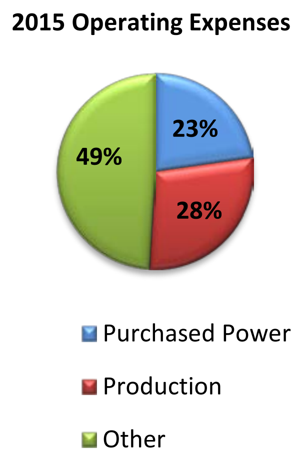
Operating Expenses

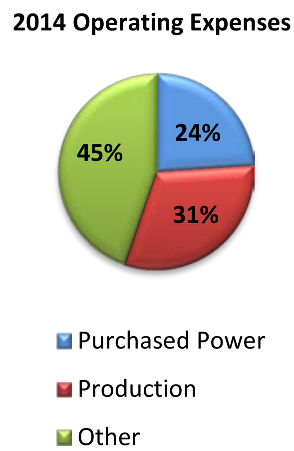
2016 compared to 2015
Operating expenses decreased $31.0 million compared to 2015. Operations which includes purchased power, production, transmission and distribution, and depletion, decreased by $40.9 million mainly due to lower gas and power prices as well as lower volumes. This decrease was offset by a $9.9 million increase in the remaining other operating costs.

2015 compared to 2014
Operating expenses decreased $49.1 million compared to 2014. Operations which includes purchased power, production, transmission and distribution, and depletion, decreased by $69.7 million mainly due to lower gas and power prices as well as lower volumes. This decrease was offset by a $19.9 million increase in administrative, general and customer costs.

The following charts show the breakdown of operating expenses:







Other Revenues

2016 compared to 2015
Other revenues were $8.0 million higher in 2016, which was mainly attributable to a $17.9 million refund from PG&E, offset by higher ineffective gas swaps, lower equity earnings from affiliate and lower grant revenues.

2015 compared to 2014
Other revenues were $44.1 million lower in 2015, which was partially attributable to the difference in the amount of settlement proceeds received related to the Rancho Seco nuclear waste disposal litigation. In 2015 and 2014, SMUD received settlement proceeds of $22.5 million and $53.1 million, respectively. In addition, $16.9 million was written off for the terminated Iowa Hill Project.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
CONSOLIDATED STATEMENTS OF NET POSITION

	DECEMBER 31, 2016	DECEMBER 31, 2015 (Restated)
	(thousands of dollars)	
ASSETS		
ELECTRIC UTILITY PLANT		
Plant in service	$ 5,781,353	$ 5,637,649
Less accumulated depreciation and depletion	(2,652,574)	(2,489,820)
Plant in service - net	3,128,779	3,147,829
Construction work in progress	216,081	176,071
Total electric utility plant - net	3,344,860	3,323,900
RESTRICTED AND DESIGNATED ASSETS		
Revenue bond and debt service reserves	115,465	114,231
Nuclear decommissioning trust fund	8,357	8,292
Rate stabilization fund	35,154	30,251
Other funds	10,487	9,262
Less current portion	(112,722)	(114,574)
Total restricted and designated assets	56,741	47,462
CURRENT ASSETS		
Unrestricted cash and cash equivalents	209,282	214,390
Unrestricted investments	442,752	341,036
Restricted and designated cash and cash equivalents	43,104	43,518
Restricted and designated investments	69,618	71,056
Receivables - net:		
Retail customers	163,629	166,205
Wholesale and other	31,100	24,714
Regulatory costs to be recovered within one year	11,523	21,242
Investment derivative instruments maturing within one year	420	-0-
Hedging derivative instruments maturing within one year	7,881	7,740
Inventories	55,644	61,486
Prepaid gas to be delivered within one year	30,909	27,768
Credit support collateral deposits	-0-	20,523
Prepayments	18,785	21,278
Total current assets	1,084,647	1,020,956
NONCURRENT ASSETS		
Regulatory costs for future recovery	586,895	602,104
Prepaid gas	256,935	287,844
Prepaid power and capacity	129,847	135,332
Investment derivative instruments	175	-0-
Hedging derivative instruments	20,389	21,721
Energy efficiency loans - net	23,586	29,039
Credit support collateral deposits	1,500	24,997
Due from affiliated entity	18,975	16,208
Prepayments and other	149,702	118,169
Total noncurrent assets	1,188,004	1,235,414
TOTAL ASSETS	5,674,252	5,627,732
DEFERRED OUTFLOWS OF RESOURCES		
Accumulated decrease in fair value of hedging derivatives	124,895	199,621
Deferred pension outflows	116,253	27,643
Unamortized bond losses	38,053	36,085
Total deferred outflows of resources	279,201	263,349
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	$ 5,953,453	$ 5,891,081

The accompanying notes are an integral part of these consolidated financial statements.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
CONSOLIDATED STATEMENTS OF NET POSITION

	DECEMBER 31, 2016	DECEMBER 31, 2015 (Restated)
	(thousands of dollars)	
LIABILITIES		
LONG-TERM DEBT - net	$ 2,504,650	$ 2,674,120
CURRENT LIABILITIES		
Commercial paper notes	200,000	200,000
Accounts payable	72,796	68,485
Purchased power payable	18,552	21,677
Credit support collateral obligation	3,937	4,389
Long-term debt due within one year	160,585	152,060
Accrued decommissioning	6,439	8,822
Interest payable	35,754	37,898
Accrued salaries and compensated absences	36,926	34,034
Investment derivative instruments maturing within one year	6,521	12,579
Hedging derivative instruments maturing within one year	28,234	65,200
Customer deposits and other	59,907	44,304
Total current liabilities	629,651	649,448
NONCURRENT LIABILITIES		
Net pension liability	499,228	381,341
Accrued decommissioning	153,121	152,359
Investment derivative instruments	9,641	19,377
Hedging derivative instruments	96,661	134,422
Self insurance and other liabilities	81,952	78,815
Total noncurrent liabilities	840,603	766,314
TOTAL LIABILITIES	3,974,904	4,089,882
DEFERRED INFLOWS OF RESOURCES		
Accumulated increase in fair value of hedging derivatives	28,270	29,461
Regulatory credits	370,212	353,821
Deferred pension inflows	25,187	47,579
Financing obligation and other	220,957	231,673
Total deferred inflows of resources	644,626	662,534
NET POSITION		
Net investment in capital assets	816,295	658,199
Restricted		
Revenue bond and debt service	70,197	66,383
Other funds	6,710	5,034
Unrestricted	440,721	409,049
TOTAL NET POSITION	1,333,923	1,138,665
COMMITMENTS, CLAIMS AND CONTINGENCIES (Notes 17 and 18)		
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION	$ 5,953,453	$ 5,891,081

The accompanying notes are an integral part of these consolidated financial statements.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
CONSOLIDATED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

	Year Ended December 31, 2016	Year Ended December 31, 2015 (Restated)
	(thousands of dollars)	
OPERATING REVENUES		
Residential	$ 645,430	$ 621,830
Commercial and industrial	702,690	697,044
Street lighting and other	40,687	36,734
Wholesale	88,090	82,052
Senate Bill - 1 revenue deferral	(5,142)	(4,181)
AB-32 revenue	37,981	30,214
Public good deferral	(10,000)	-0-
Rate stabilization fund transfers	(4,903)	15,055
Total operating revenues	1,494,833	1,478,748
OPERATING EXPENSES		
Operations:		
Purchased power	243,031	288,835
Production	350,382	349,862
Transmission and distribution	76,290	74,924
Administrative, general and customer	191,658	186,376
Public good	65,210	70,073
Maintenance	104,913	95,378
Depreciation	184,043	188,928
Depletion	12,103	9,094
Regulatory amounts collected in rates	12,127	7,299
Total operating expenses	1,239,757	1,270,769
OPERATING INCOME	255,076	207,979
NON-OPERATING REVENUES AND EXPENSES		
Other revenues and (expenses):		
Interest income	8,646	7,511
Investment expense	(13,134)	(11,045)
Other income - net	47,565	38,574
Total other revenues and (expenses)	43,077	35,040
Interest charges:		
Interest on debt	105,141	114,760
Allowance for funds used during construction	(2,246)	(1,818)
Total interest charges	102,895	112,942
CHANGE IN NET POSITION	195,258	130,077
NET POSITION - BEGINNING OF YEAR	1,138,665	1,008,588
NET POSITION - END OF YEAR	$ 1,333,923	$ 1,138,665

The accompanying notes are an integral part of these consolidated financial statements.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31, 2016	Year Ended December 31, 2015 (Restated)
	(thousands of dollars)	
CASH FLOWS FROM OPERATING ACTIVITIES		
Receipts from customers	$ 1,387,897	$ 1,339,541
Receipts from surplus power sales	61,370	56,014
Receipts from surplus gas sales	24,976	27,580
Receipts from steam sales	3,998	4,221
Other receipts	58,950	51,288
Payments/receipts for credit support collateral	43,568	(37,291)
Issuance/repayment of energy efficiency loans - net	5,824	4,685
Payments to employees - payroll and other	(279,360)	(264,726)
Payments for wholesale power	(249,919)	(297,805)
Payments for gas purchases	(194,279)	(221,485)
Payments to vendors/others	(300,456)	(326,570)
Payments for decommissioning	(9,111)	(6,966)
Net cash provided by operating activities	553,458	328,486
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
Repayment of debt	(25,925)	(23,685)
Receipts from federal and state grants	9,600	12,798
Interest on debt	(13,221)	(14,206)
Net cash used in noncapital financing activities	(29,546)	(25,093)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Construction expenditures	(197,465)	(181,849)
Contributions in aid of construction	14,491	14,710
Net proceeds from bond issues	-0-	223,708
Repayments and refundings of debt	(126,855)	(413,655)
Interest on debt	(103,860)	(110,795)
Net cash used in capital and related financing activities	(413,689)	(467,881)
CASH FLOWS FROM INVESTING ACTIVITIES		
Sales and maturities of securities	227,820	396,660
Purchases of securities	(332,209)	(303,985)
Interest and dividends received	7,864	8,089
Investment revenue/expenses - net	(13,509)	(10,754)
Net cash provided by (used in) investing activities	(110,034)	90,010
Net increase (decrease) in cash and cash equivalents	189	(74,478)
Cash and cash equivalents at the beginning of the year	262,583	337,061
Cash and cash equivalents at the end of the year	$ 262,772	$ 262,583
Cash and cash equivalents included in:		
Unrestricted cash and cash equivalents	$ 209,282	$ 214,390
Restricted and designated cash and cash equivalents	43,104	43,518
Restricted and designated assets (a component of the total of $56,741 (and $47,462 at December 31, 2016 and 2015, respectively)	10,386	4,675
Cash and cash equivalents at the end of the year	$ 262,772	$ 262,583

The accompanying notes are an integral part of these consolidated financial statements.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
SUPPLEMENTAL CASH FLOW INFORMATION

A reconciliation of the consolidated statements of cash flows operating activities to operating income as follows:

	Year Ended December 31,	
	2016	2015 (Restated)
	(thousands of dollars)	
Operating income	$ 255,076	$ 207,979
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	184,043	188,928
Depletion	12,103	9,094
Regulatory amortization	12,127	7,299
Amortization of advance capacity & other	(1,427)	(1,363)
Amortization of prepaid gas supply	27,768	24,893
Revenue recognized from regulatory credits - net	20,045	(16,213)
Other receipts/payments	17,532	25,361
Changes in operating assets, deferred outflows, liabilities and deferred inflows:		
Receivables - retail customers, wholesale and other	4,929	(6,113)
Inventories, prepayments and other	(24,319)	(41,646)
Credit support collateral deposits	44,020	(41,520)
Deferred pension outflows	(88,610)	(5,155)
Payables and accruals	4,239	(11,134)
Credit support collateral obligation	(452)	4,229
Decommissioning	(9,111)	(6,966)
Net pension liability	117,887	54,639
Deferred pension inflows	(22,392)	(63,826)
Net cash provided by operating activities	$ 553,458	$ 328,486

The supplemental disclosure of noncash financing and investing activities is as follows:

	Year Ended December 31,	
	2016	2015 (Restated)
	(thousands of dollars)	
Net amortization of debt related (expenses) and premiums	$ 9,135	$ 5,884
Unrealized holding loss	(543)	(411)
Change in valuation of derivative financial instruments	89,925	(52,669)
Amortization of revenue for assets contributed in aid of construction	18,988	18,647
Allowance for funds used during construction	2,246	1,818
Construction expenditures included in accounts payable	20,141	19,115
Bond proceeds deposited into an escrow account for purposes of refunding long-term debt	186,324	-0-

The accompanying notes are an integral part of these consolidated financial statements.

Sacramento Municipal Utility District
Notes To Consolidated Financial Statements

NOTE 1. ORGANIZATION

The Sacramento Municipal Utility District (SMUD) was formed and operates under the State of California Municipal Utility District Act (Act). The Act gives SMUD the rights and powers to fix rates and charges for commodities or services it furnishes, and to incur indebtedness and issue bonds or other obligations.

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 adjoining portions of Placer and Yolo Counties. The Board of Directors (Board) determines SMUD's rates.

As a community-owned utility, SMUD is not subject to regulation or oversight by the California Public Utilities Commission.

SMUD is exempt from payment of federal and state income taxes and, under most circumstances, real and personal property taxes. SMUD is not exempt from real and personal property taxes on assets it holds outside of California. In addition, SMUD is responsible for the payment of a portion of the property taxes associated with its real property in California that lies outside of its service area.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Method of Accounting. SMUD's accounting records are maintained in accordance with Generally Accepted Accounting Principles (GAAP) for proprietary funds as prescribed by the Governmental Accounting Standards Board (GASB). SMUD's accounting records generally follow the Uniform System of Accounts for Public Utilities and Licensees prescribed by the Federal Energy Regulatory Commission (FERC), except as it relates to the accounting for contributions of utility property in aid of construction. SMUD's Consolidated Financial Statements are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of the related cash flows. Electric revenues and costs that are directly related to the acquisition, generation, transmission, and distribution of electricity are reported as operating revenues and expenses. All other revenues and expenses are reported as non-operating revenues and expenses.

Use of Estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

The Financial Reporting Entity. These Consolidated Financial Statements include SMUD and its component units. Although the component units are legally separate from SMUD, they are blended into and reported as part of SMUD because of the extent of their operational and financial relationships with SMUD. All significant inter-component transactions have been eliminated in consolidation.

Component Units. The component units include the Central Valley Financing Authority (CVFA), the Sacramento Cogeneration Authority (SCA), the Sacramento Municipal Utility District Financing Authority (SFA), the Sacramento Power Authority (SPA), and the Northern California Gas Authority No. 1 (NCGA). The primary purpose of CVFA, SCA, SFA and SPA is to own and operate electric utility plants that supply power to SMUD. The primary purpose of NCGA is to prepay for natural gas and to sell the natural gas to SMUD. SMUD's Board comprises the Commissions that govern these entities (see Note 6).

Plant in Service. Capital assets are generally defined by SMUD as tangible assets with an initial, individual cost of more than three thousand dollars and an estimated useful life in excess of two years. The cost of additions to Plant in Service and replacement property units is capitalized. Repair and maintenance costs are charged to expense when incurred. When SMUD retires portions of its Utility Plant, retirements are recorded against Accumulated Depreciation and the retired portion of Utility Plant is removed from Plant in Service. The costs of removal and the related salvage value, if any, are charged or credited as appropriate to Accumulated Depreciation. SMUD generally computes depreciation on Plant in Service on a straight-line, service-life basis. The consolidated average annual composite depreciation rates for 2016 and 2015 were 3.3 and 3.5 percent, respectively. Depreciation is calculated using the following estimated lives:

Generation	5 to 80 years
Transmission and Distribution	15 to 50 years
Gas Pipeline	5 to 90 years
General	5 to 60 years

Investment in Joint Powers Agency (JPA). SMUD's investment in the Transmission Agency of Northern California (TANC) is accounted for under the equity method of accounting and is reported as a component of Plant in Service. SMUD's share of the TANC debt service costs and operations and maintenance expense, inclusive of depreciation, is included in Transmission and Distribution expense in the Consolidated Statements of Revenues, Expenses and Changes in Net Position (see Note 5).

SMUD's investment in the Balancing Authority of Northern California (BANC) is accounted for under the equity method of accounting. SMUD's share of the BANC operations and maintenance expense is included in Transmission and Distribution expense in the Consolidated Statements of Revenues, Expenses and Changes in Net Position (see Note 5).

Investment in Gas Properties. SMUD has an approximate 21 percent non-operating ownership interest in the Rosa Unit gas properties in New Mexico of which, SMUD's portion of the extracted gas is transported for use in its component unit natural gas-fired power plants (see Note 6). SMUD uses the successful efforts method of accounting for its investment in gas producing properties. Costs to acquire mineral interests in gas properties, to drill and equip exploratory wells that find proved reserves, and to drill and equip development wells are capitalized as a component of Plant in Service on the Consolidated Statements of Net Position. Costs to drill exploratory wells that do not find proved reserves, geological and geophysical costs, and costs of carrying and retaining unproved properties are expensed. SMUD has purchased proven reserves and has not participated in exploratory drilling. Capitalized costs of producing gas properties, after considering estimated residual salvage values, are depleted by the unit-of–production method based on the estimated future production of the proved developed producing wells. SMUD's investment in gas properties is reported as a component of Plant in Service.

Restricted and Designated Assets. Cash, cash equivalents, and investments, which are restricted under terms of certain agreements for payments to third parties or Board actions limiting the use of such funds, are included as restricted assets. When SMUD restricts funds for a specific purpose, and both restricted and unrestricted resources are available for use, it is SMUD's policy to use restricted resources first, then unrestricted resources as they are needed.

Restricted Bond Funds. SMUD's Indenture Agreements (Indenture) requires the maintenance of minimum levels of reserves for debt service on the 1997 Series K Bonds and the 2003 Series R Bonds. In 2015, the 2003 Series R Bonds were paid off and only the reserve for debt service for the 1997 Series K Bonds existed at December 31, 2016 and 2015.

Nuclear Decommissioning Trust Fund. SMUD made annual contributions to its Nuclear Decommissioning Trust Fund (Trust Fund) through 2008 to cover the cost of its primary decommissioning activities associated with the Rancho Seco facility. Primary decommissioning excludes activities associated with the spent fuel storage facility after 2008 and most non-radiological decommissioning tasks. SMUD determined early in 2008 that there were enough funds in the trust to complete the radiological decommissioning of the Rancho Seco nuclear plant site, and stopped contributing to the Trust Fund (see Note 13). Interest earnings on the Trust Fund assets are recorded as Interest Income and are accumulated in the Trust Fund.

Accrued Decommissioning. SMUD accrues decommissioning costs related to Utility Plant when an obligation to decommission facilities is legally required. Adjustments are made to such liabilities based on estimates by SMUD staff in accordance with FASB ASC 410, "***Asset Retirement and Environmental Obligations"*** (FASB ASC 410). For active plants, such costs are included in the Utility Plant's cost and as a component of Operating Expense over the Utility Plant's life. Expenditures for decommissioning activities are recorded as reductions to Accrued Decommissioning liability. Changes in the Rancho Seco decommissioning liability estimates arising from inflation, annual accretion, and other changes to the cost assumptions are recorded to Accrued Decommissioning with a corresponding adjustment to the related regulatory deferral. The current portion of the Accrued Decommissioning liability represents SMUD's estimate of actual expenditures in the next year, as set forth in the annual budget.

SMUD has identified potential retirement obligations related to certain generation, distribution and transmission facilities. SMUD's non-perpetual leased land rights generally are renewed continuously because SMUD intends to utilize these facilities indefinitely. Since the timing and extent of any potential asset retirements are unknown, the fair value of any obligations associated with these facilities cannot be reasonably estimated. Accordingly, a liability has not been recorded.

At December 31, 2016 and 2015, SMUD's Accrued Decommissioning balance in the Consolidated Statements of Net Position relating to Rancho Seco was $148.0 million and $150.4 million, respectively (see Note 13). The Accrued Decommissioning balance in the Consolidated Statements of Net Position relating to other electricity generation and gas production facilities totaled $11.6 million and $10.8 million as of December 31, 2016 and 2015, respectively.

Cash and Cash Equivalents. Cash and cash equivalents include all debt instruments purchased with an original maturity of 90 days or less, all investments in the Local Agency Investment Fund (LAIF), and money market mutual funds. LAIF has an equity interest in the State of California (State) Pooled Money Investment Account (PMIA). PMIA funds are on deposit with the State's Centralized Treasury System and are managed in compliance with the California Government Code according to a statement of investment policy which sets forth permitted investment vehicles, liquidity parameters, and maximum maturity of investments. SMUD's deposits with LAIF comprise cash representing demand deposits up to a $65.0 million maximum and cash equivalents representing amounts which may be withdrawn once per month after a thirty-day period (see Note 7).

Investments. SMUD's investments are reported at fair value in accordance with Statement of Governmental Accounting Standards (SGAS) No. 72, ***"Fair Value Measurement and Application,"*** (see Note 3). Realized and unrealized gains and losses are included in Other Income – Net in the Consolidated Statements of Revenues, Expenses and Changes in Net Position. Premiums and discounts on zero coupon bonds are amortized using the effective interest method. Premiums and discounts on other securities are amortized using the straight-line method, which approximates the effective interest method.

Electric Operating Revenues. Electric revenues are billed on the basis of monthly cycle bills and are recorded as revenue when the electricity is delivered. SMUD records an estimate for unbilled revenues earned from the dates its retail customers were last billed to the end of the month. At December 31, 2016 and 2015, unbilled revenues were $72.2 million and $72.5 million, respectively.

Purchased Power Expenses. A portion of SMUD's power needs are provided through power purchase agreements. Expenses from such agreements, along with associated transmission costs paid to other utilities, are charged to Purchased Power expense on the Consolidated Statements of Revenues, Expenses and Changes in Net Position in the period the power is received. The costs, or credits, associated with energy swap agreements (gas and electric) or other arrangements that affect the net cost of Purchased Power are recognized in the period in which the underlying power delivery occurs. Contract termination payments and adjustments to prior billings are included in Purchased Power expense once the payments or adjustments can be reasonably estimated.

Advanced Capacity Payments. Some long-term agreements to purchase energy or capacity from other providers call for up-front payment. Such costs are generally recorded as an asset and amortized over the length of the contract.

Credit and Market Risk. SMUD enters into forward purchase and sales commitments for physical delivery of gas and electricity with utilities and power marketers. SMUD is exposed to credit risk related to nonperformance by its wholesale counterparties under the terms of these contractual agreements. In order to limit the risk of counterparty default, SMUD has a wholesale counterparty risk policy which includes using the credit agency ratings of SMUD's counterparties and other credit services, credit enhancements for counterparties that do not meet an acceptable risk level, and the use of standardized agreements that allow for the netting of positive and negative exposures associated with a single counterparty. SMUD is also subject to similar requirements for many of its gas and power purchase agreements. SMUD uses a combination of cash and securities to satisfy its collateral requirements to counterparties. SMUD's component unit, NCGA, entered into a guaranteed investment contract and is exposed to credit risk related to nonperformance by its investment provider. The investment provider provides collateral if their credit ratings fall below agreed upon levels. At December 31, 2016 and 2015, respectively, SMUD held $3.9 million and $4.4 million on deposit by counterparties and an investment provider. The amount is recorded as unrestricted cash and current restricted cash with an associated current liability. At December 31, 2016 and 2015, SMUD posted cash collateral of $1.5 million and $45.5 million, respectively, with counterparties.

Accounts Receivable and Allowance for Doubtful Accounts. Accounts Receivable is recorded at the invoiced amount and does not bear interest, except for accounts related to energy efficiency loans. SMUD recognizes an estimate of uncollectible accounts for its receivables related to electric service, energy efficiency loans, and other non-electric billings, based upon its historical experience with collections and current energy market conditions. For large wholesale receivable balances, SMUD determines its bad debt reserves based on the specific credit issues for each account. SMUD records bad debts for its estimated uncollectible accounts related to electric service as a reduction to the related operating revenues in the Consolidated Statements of Revenues, Expenses and Changes in Net Position. SMUD records bad debts for its estimated uncollectible accounts related to energy efficiency loans and other non-electric billings in Administrative, General and Customer expense in the Consolidated Statements of Revenues, Expenses and Changes in Net Position.

The summarized activity of the changes in the allowance for doubtful accounts during 2016 and 2015 is presented below:

	Balance at beginning of Year	Additions	(Write-offs) and Recoveries	Balance at end of Year
	(thousands of dollars)			
Other Non-Electric:				
December 31, 2016	$ 1,771	$ 663	$ (1,603)	$ 831
December 31, 2015	$ 1,993	$ 691	$ (913)	$ 1,771
Retail Customers:				
December 31, 2016	$ 3,116	$ 3,920	$ (4,639)	$ 2,397
December 31, 2015	$ 3,017	$ 5,514	$ (5,415)	$ 3,116
Energy Efficiency Loans:				
December 31, 2016	$ 1,041	$ (953)	$ 716	$ 804
December 31, 2015	$ 1,327	$ (873)	$ 587	$ 1,041

Regulatory Deferrals. The Board has the authority to establish the level of rates charged for all SMUD services. As a regulated entity, SMUD's financial statements are prepared in accordance with SGAS Statement No. 62, ***"Codification of Accounting and financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements,"***

which requires that the effects of the rate-making process be recorded in the financial statements. Accordingly, certain expenses and credits, normally reflected in Change in Net Position as incurred, are recognized when included in rates and recovered from, or refunded to, customers. SMUD records various regulatory assets and credits to reflect rate-making actions of the Board (see Note 8).

Materials and Supplies. Materials and supplies are stated at average cost, which approximates the first-in, first-out method.

Compensated Absences. SMUD accrues vacation leave and compensatory time when employees earn the rights to the benefits. SMUD does not record sick leave as a liability until it is taken by the employee, since there are no cash payments made for sick leave when employees terminate or retire. At December 31, 2016 and 2015, the total estimated liability for vacation and other compensated absences was $24.9 million and $23.9 million, respectively.

Public Good. Public Good expenses consist of non-capital expenditures for energy efficiency programs, low income subsidies, renewable energy resources and technologies, and research and development.

Gains/Losses on Bond Refundings. Gains and losses resulting from bond refundings are included as a component of Deferred Inflows of Resources or Deferred Outflows of Resources on the Consolidated Statements of Net Position and amortized as a component of Interest on Debt in the Consolidated Statements of Revenues, Expenses and Changes in Net Position over the shorter of the life of the refunded debt or the new debt using the effective interest method.

Gains/Losses on Bond Defeasances or Extinguishments. Gains and losses resulting from bond defeasances or extinguishments that were not financed with the issuance of new debt are included as a component of Interest on Debt in the Consolidated Statements of Revenues, Expenses and Changes in Net Position.

Allowance for Funds Used During Construction (AFUDC). SMUD capitalizes, as an additional cost of Construction Work In Progress (CWIP), AFUDC, which represents the cost of borrowed funds used for such purposes. The amount capitalized is determined by a formula prescribed by FERC. The AFUDC rate for 2016 and 2015 was 2.3 percent and 2.8 percent, of eligible CWIP, respectively.

Derivative Financial Instruments. SMUD records derivative financial instruments (interest rate swap and gas price swap agreements, certain wholesale sales agreements, certain power purchase agreements and option agreements) at fair value on its Consolidated Statements of Net Position. SMUD does not enter into agreements for speculative purposes. Fair value is estimated by comparing contract prices to forward market prices quoted by third party market participants and/or provided in relevant industry publications. SMUD is exposed to risk of nonperformance if the counterparties default or if the swap agreements are terminated. SMUD reports derivative financial instruments with remaining maturities of one year or less and the portion of long-term contracts with scheduled transactions over the next twelve months as current on the Consolidated Statements of Net Position (see Note 9).

Interest Rate Swap Agreements. SMUD enters into interest rate swap agreements to modify the effective interest rates on outstanding debt (see Notes 9 and 10).

Gas and Electricity Price Swap and Option Agreements. SMUD uses forward contracts to hedge the impact of market volatility on gas commodity prices for its gas-fueled power plants and for energy prices on purchased power for SMUD’s retail load (see Note 9).

Solano Wind Sale. SMUD entered into an agreement to sell the Solano Wind Phase 3 plant in December 2011 with a corresponding Power Purchase Agreement for all output of the plant. In April 2012, under the terms of the Construction Management Agreement, SMUD, on behalf of the purchaser, completed construction of the plant, with the revenue recognition from the transaction, which was accounted for as a financing agreement, to occur over the life of the contracts. Pursuant to the Facility Administration Agreement, SMUD will perform services at the facility under the direction and for the benefit of the purchaser. Pursuant to the ground and property lease, SMUD is leasing the site to the purchaser for a term of twenty years with an option to extend for five additional years.

The sale proceeds have been recorded as Deferred Inflows of Resources on the Consolidated Statements of Net Position and are amortized as Purchased Power Expense on the Consolidated Statements of Revenues, Expenses and Changes in Net Position over the life of the agreement. Sale proceeds in the amount of $63.1 million were received in 2013. The prepayment for purchased power over the life of the contract has been recorded as Prepaid Power and Capacity on the Consolidated Statements of Net Position and are amortized as Purchased Power Expense on the Consolidated Statements of Revenues, Expenses and Changes in Net Position over the life of the agreement (see Note 17 for language about the Power Purchase Agreement).

Precipitation Hedge Agreements. SMUD enters into non-exchange traded precipitation hedge agreements to hedge the cost of replacement power caused by low precipitation years (Precipitation Agreements). SMUD records the intrinsic value of the Precipitation Agreements on the Consolidated Statements of Net Position. Settlement of the Precipitation Agreements is not performed until the end of the period covered (water year ended September 30). The intrinsic value of a Precipitation Agreement is the difference between the expected results from a monthly allocation of the cumulative rainfall amounts, in an average rainfall year, and the actual rainfall during the same period.

Insurance Programs. SMUD records liabilities for unpaid claims at their present value when they are probable in occurrence and the amount can be reasonably estimated. SMUD records a liability for unpaid claims associated with general, auto, workers' compensation, and short-term and long-term disability based upon estimates derived by SMUD's claims administrator or SMUD staff. The liability comprises the present value of the claims outstanding, and includes an amount for claim events incurred but not reported based upon SMUD's experience (see Note 16).

Pollution Remediation. SGAS No. 49, ***"Accounting and Financial Reporting for Pollution Remediation Obligations,"*** (GASB No. 49) requires that a liability be recognized for expected outlays for remediating existing pollution when certain triggering events occur. SMUD recorded a pollution remediation obligation for its North City Substation, which was built on a former landfill and also for the Former Community Linen Rental Services Property (see Note 18). In 2016, SMUD identified and recorded a pollution remediation obligation for a land site where it will be building a substation (see Note 18) and in 2015, SMUD identified and recorded a pollution remediation obligation for its Headquarters building that it will be renovating. At December 31, 2016 and 2015, the total pollution remediation liability was $35.3 million and $19.7 million, respectively, and recorded as either Current Liabilities, Customer Deposits and Other or Noncurrent Liabilities, Self Insurance and Other Liabilities in the Consolidated Statements of Net Position. Costs were estimated using the expected cash flow technique prescribed under GASB No. 49, including only amounts that are reasonably estimable.

Hydro License. SMUD owns and operates the Upper American River Hydroelectric Project (UARP). The original license to construct and operate the UARP was issued in 1957 by FERC. In 2014, SMUD received a new hydro license for a term of 50 years, effective July 1, 2014. As part of the hydro licensing process, SMUD entered into four contracts with government agencies whereby SMUD makes annual payments to them for various services for the term of the license. At December 31, 2016 and 2015, the liability for these contract payments was $57.8 million and $55.0 million, respectively, and recorded as either Current Liabilities, Customer Deposits and Other or Noncurrent Liabilities, Self Insurance and Other Liabilities in the Consolidated Statements of Net Position (see Note 17).

Assembly Bill 32. California Assembly Bill 32 (AB-32) is an effort by the State of California to set a 2020 greenhouse gas emissions reduction goal into law. The goal is to reach a statewide emission limit of 427 million metric tons of carbon dioxide equivalent of greenhouse gases (GHG). Central to this initiative is the implementation of a cap and trade program, which covers major sources of GHG emissions in the State including power plants. The cap and trade program includes an enforceable emissions cap that will decline over time. The State will distribute allowances, which are tradable permits, equal to the emissions allowed under the cap. Sources under the cap will need to surrender allowances and offsets equal to their emissions at the end of each compliance period. SMUD is subject to AB-32 and participated in the program auctions in 2015 and 2016. In a normal water year, SMUD expects its free allocation of allowances from the Air Resources Board to cover its compliance costs associated with electricity delivered to its retail customers. SMUD expects to recover compliance costs associated with wholesale power sales costs through its wholesale power sales revenues. SMUD is monitoring legislation and proposed programs that would impact AB-32.

Net Pension Liability (NPL). SMUD implemented SGAS No. 68 ***"Accounting and Financial Reporting for Pensions – An Amendment of GASB Statement No. 27"*** (GASB No. 68) in 2015. Under GASB No. 68, the NPL is the difference between the actuarial present value of projected pension benefit payments attributable to employees' past service and the Plan's fiduciary net position. At December 31, 2016 and 2015, the NPL was $499.2 million and $381.3 million, respectively (see Note 14).

Net Position. SMUD classifies its net position into three components as follows:

- Net investment in capital assets – This component of net position consists of capital assets, net of Accumulated Depreciation, reduced by the outstanding debt balances, net of unamortized debt expenses. Deferred inflows and outflows of resources that are attributable to the acquisition, construction or improvement of those assets or related debt are also included.
- Restricted – This component of net position consists of assets with constraints placed on their use, either externally or internally. Constraints include those imposed by debt indentures (excluding amounts considered in net capital, above), grants or laws and regulations of other governments, or by law through constitutional provisions or enabling legislation or by the Board. These restricted assets are reduced by liabilities and deferred inflows of resources related to those assets.
- Unrestricted – This component of net position consists of net amount of the assets, deferred outflows of resources, liabilities, and deferred inflows of resources that do not meet the definition of "Net investment in capital assets" or "Restricted."

Contributions in Aid of Construction (CIAC). SMUD records CIAC from customer contributions, primarily relating to expansions to SMUD's distribution facilities, as Other Income - Net in the Consolidated Statements of Revenues, Expenses and Changes in Net Position. Contributions of capital are valued at estimated market cost. For rate-making purposes, the Board does not recognize such revenues when received; rather, CIAC is included in revenues as such costs are amortized over the estimated useful lives of the related distribution facilities.

Revenues and Expenses. SMUD distinguishes operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with SMUD's principal ongoing operations. The principal operating revenues of SMUD are charges to customers for sales and services. Operating expenses include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

Grants. SMUD receives grant proceeds from federal and state assisted programs for its projects which include, but are not limited to, advanced and renewable technologies, electric transportation, and energy efficiency. SMUD also periodically receives grant proceeds from federal or state assistance programs as partial reimbursements for costs it has incurred as a result of storm damages. When applicable, these programs may be subject to financial and compliance audits pursuant to regulatory requirements. SMUD considers the possibility of any material disallowances to be remote. During 2016, SMUD recorded $0.5 million of grant proceeds and recognized $0.3 million as a component of Other Income - Net, in the Consolidated Statements of Revenues, Expenses and Changes in Net Position, and $0.2 million as a Regulatory Credit. During 2015, SMUD recorded $3.0 million of grant proceeds and recognized $2.5 million as a component of Other Income - Net, in the Consolidated Statements of Revenues, Expenses and Changes in Net Position, and $0.5 million as a Regulatory Credit (see Note 8).

In 2010, SMUD issued taxable Build America Bonds. SMUD receives an interest subsidy from the federal government equal to 35 percent of the interest paid (see Note 10). SMUD received reduced subsidy payments in 2016 and 2015 due to budget sequestration by the federal government. SMUD recognized $9.1 million in revenues in 2016 and also in 2015 for its Build America Bonds, as a component of Other Income - Net, in the Consolidated Statements of Revenues, Expenses and Changes in Net Position.

Customer Sales and Excise Taxes. SMUD is required by various governmental authorities, including states and municipalities, to collect and remit taxes on certain customer sales. Such taxes are presented on a net basis and excluded from revenues and expenses in the Consolidated Statements of Revenues, Expenses and Changes in Net Position.

Rancho Seco Litigation. In June 1983, SMUD and the United States (U.S.) Department of Energy (DOE) entered into a contract whereby the DOE would build a repository for the acceptance and disposal of SMUD's spent nuclear fuel (SNF) and/or high-level radioactive waste (HLW). SMUD paid the DOE a total of approximately $40.0 million in fees under the contract, thus satisfying its obligation of performance under the contract. DOE did not build a repository and therefore breached its obligation under the contract to commence acceptance of SNF and HLW by January 31, 1998. As a result, SMUD incurred costs to design, license, and fabricate its own on-site storage facility for the long term dry storage of its spent fuel at Rancho Seco. SMUD filed a suit against the DOE in 2009 which covered costs incurred from 2004 through 2009. In February 2015, SMUD received an award for $22.5 million from the U.S. Court of Claims which was recorded as Other Income – Net in the Consolidated Statements of Revenues, Expenses and Changes in Net Position. In June 2015, SMUD filed a suit against DOE which covered the costs incurred from 2010 through at least June 2015.

Pacific Gas & Electric (PG&E) Refund. In June 2016, SMUD received a $17.9 million refund from PG&E in association with the PG&E 2010 natural gas transmission pipeline explosion in San Bruno. The California Public Utilities Commission imposed a penalty on PG&E requiring them to provide a one-time bill credit to natural gas customers on their June 2016 bills based on usage for a prescribed time period. The $17.9 million refund was recorded as Other Income – Net in the Consolidated Statements of Revenues, Expenses and Changes in Net Position and passed through to the component units.

Subsequent Events. Subsequent events for SMUD have been evaluated through February 17, 2017, which is the date that the financial statements were available to be issued.

Reclassifications. Certain amounts in the 2015 Consolidated Financial Statements have been reclassified in order to conform to the 2016 presentation.

Recent Accounting Pronouncements. In June 2015, GASB issued SGAS No. 75, ***"Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions"*** (GASB No. 75). The primary objective of GASB No. 75 is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). This statement replaces the requirements of SGAS No. 45 ***"Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions,"*** as amended, and SGAS No. 57 ***"OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans."*** This statement establishes standards for measuring and recognizing liabilities, deferred outflows and deferred inflows of resources, and expenses. For defined benefit OPEB, GASB No. 75 identifies the methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service. Note disclosure and required supplementary information requirements about defined benefit OPEB also are addressed. In addition, this statement details the recognition and disclosure requirements for employers with payables to defined benefit OPEB plans that are administered through trusts that meet the specified criteria. This statement is effective for SMUD in 2018. SMUD is currently assessing the financial statement impact of adopting this statement.

In June 2015, GASB issued SGAS No. 76, ***"The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments"*** (GASB No. 76). GASB No. 76 established the hierarchy of GAAP for state and local governments.

This statement supersedes SGAS No. 55, ***"The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments."*** The GAAP hierarchy sets forth what constitutes GAAP for all state and local governmental entities. It establishes the order of priority of pronouncements and other sources of accounting and financial reporting guidance that a governmental entity should apply. Category A is comprised of GASB statements. Category B includes GASB Technical Bulletins, GASB Implementation Guides, and literature of the AICPA cleared by the GASB. This statement is effective for SMUD in 2016. SMUD has assessed the financial statement impact of adopting the new statement, and its impact is not material.

In November 2016, GASB issued SGAS No. 83, ***"Certain Asset Retirement Obligations"*** (GASB No. 83). An Asset Retirement Obligation (ARO) is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this statement. GASB No. 83 establishes the criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for AROs. Recognition occurs when the liability is both incurred and reasonably estimable. The determination of when the liability is incurred should be based on the occurrence of external laws, regulations, contracts, or court judgments, together with the occurrence of an internal event that obligates the government to perform the asset retirement activities. GASB No. 83 requires the measurement of the ARO be based on the probability weighted best estimate of the current value of outlays expected to be incurred, and adjusted for general inflation or deflation at least annually. It requires a government to evaluate all relevant factors at least annually to determine whether the effects of one or more of the factors are expected to significantly change the estimated asset retirement outlays. The ARO should only be remeasured when the result of the evaluation indicates a significant change in the estimated outlays. GASB No. 83 also requires disclosures of descriptive information about the nature of a government's AROs including the methods and assumptions used for the estimates of the liabilities, the estimated remaining useful life of the associated tangible capital assets, how any funding and assurance requirements are being met, and the amount of any assets restricted for payment of the AROs (if not separately displayed in the financial statements). If a liability for an ARO (or portions thereof) has been incurred by a government but is not yet recognized because it is not reasonably estimable, the government should disclose that fact and the reasons therefor. This statement is effective for SMUD in 2019. SMUD is currently assessing the financial statement impact of adopting this statement. SMUD currently records AROs following the FASB guidance (see **Accrued Decommissioning** under Note 2).

NOTE 3. ACCOUNTING CHANGE

In February 2015, GASB issued SGAS No. 72, ***"Fair Value Measurement and Application"*** (GASB No. 72). GASB No. 72 addresses accounting and financial reporting issues related to fair value measurements. This statement requires investments to be measured at fair value. An investment is defined as a security or other asset that (a) a government holds primarily for the purpose of income or profit and (b) has a present service capacity based solely on its ability to generate cash or to be sold to generate cash. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (described as an exit price) in an orderly transaction between market participants at the measurement date. This statement requires valuation techniques that are appropriate in the circumstances and for which sufficient data are available to be used to measure fair value. The valuation techniques should be consistent with one or more of the following approaches: the market approach, the cost approach, or the income approach. This statement establishes a hierarchy of inputs to the valuation techniques used to measure fair value. The hierarchy has three levels. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices, included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs reflecting SMUD's own assumptions developed from the best information available in the circumstances. A fair value takes into account the highest and best use for a nonfinancial asset. This statement requires disclosures to be made about fair value measurements, the level of fair value hierarchy, valuation techniques and changes in valuation techniques, and for nonrecurring fair value measurements, the reason(s) for the measurement.

This statement is effective for SMUD in 2016. SMUD implemented GASB No. 72 for investments and derivative financial instruments that are measured at fair value on a recurring basis. The implementation changed the valuation of the interest rate swap agreements. As a result, SMUD restated the December 31, 2015 Consolidated Statement of Net Position and the Supplemental Cash Flow Information to reflect this change for comparative purposes. The disclosures are presented in a table displaying the major categories of assets and liabilities measured at fair value and separated into the level of the hierarchy on which the fair value is based (see Note 12).

In March 2016, GASB issued SGAS No. 82, ***"Pension Issues – An amendment of GASB Statements No. 67, No. 68, and No. 73"*** (GASB No. 82). The objective of GASB No. 82 is to address certain issues that have been raised with respect to GASB No. 67, No. 68, and No. 73 regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. GASB No. 82 changed the required presentation of covered-employee payroll, which is the payroll of employees that are provided with pensions through a pension plan, to instead require the presentation of covered payroll, defined as the payroll on which contributions to a pension plan are based. This measure is used in ratios in the schedules of required supplementary information. GASB No. 82 clarifies that payments made by an employer to satisfy contribution requirements that are identified by the pension plan terms as plan member contribution requirements should be classified as plan member contributions for purposes of GASB No. 67 and as employee contributions for purposes of GASB No. 68. It also requires that an employer's expense and expenditures for those amounts be recognized in the period for which the contribution is assessed and classified in the same manner as the employer classifies similar compensation other than pensions (for example, as salaries and wages or as fringe benefits).

SMUD implemented GASB No. 82 in 2016. The implementation changed the classification of payments made by SMUD to satisfy employee (plan member) contribution requirements. As a result, SMUD restated the December 31, 2015 Consolidated Statement of Net Position, the Consolidated Statement of Revenues, Expenses and Changes in Net Position, and the Supplemental Cash Flow Information to reflect this change for comparative purposes. SMUD has updated the required presentation of payroll-related measures to use covered payroll, instead of covered-employee payroll, in ratios in the schedules of required supplementary information.

SMUD has restated amounts of the affected balances within the financial statements for the period ended December 31, 2015, as follows:

CONSOLIDATED STATEMENT OF NET POSITION

	December 31, 2015 (Restated)	December 31, 2015
	(thousands of dollars)	
Noncurrent Assets		
Regulatory costs for future recovery	$ 602,104	$ 602,934
Hedging derivative instruments	21,721	23,275
Deferred Outflows of Resources		
Deferred pension outflows	27,643	31,303
Noncurrent Liabilities		
Investment derivative instruments	19,377	20,207
Deferred Inflows of Resources		
Accumulated increase in fair value of hedging derivatives	29,461	31,015
Net Position		
Unrestricted	*409,049	411,661

CONSOLIDATED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

	December 31, 2015 (Restated)	December 31, 2015
	(thousands of dollars)	
Operating Expenses		
Operations:		
Production	$ *349,862	$ 346,550
Transmission and distribution	*74,924	73,909
Administrative, general and customer	*186,376	190,013
Public good	70,073	70,122
Maintenance	95,378	95,635
Change in Net Position	130,077	128,956
Net Position – Beginning of Year	1,008,588	1,013,369
Net Position – End of Year	1,138,665	1,142,325

SUPPLEMENTAL CASH FLOW INFORMATION

	December 31, 2015 (Restated)	December 31, 2015
	(thousands of dollars)	
Operating income	$ *207,979	$ 203,783
Changes in operating assets, deferred outflows, liabilities and deferred inflows:		
Deferred pension outflows	(5,155)	(4,034)
Supplemental disclosure of noncash financing and investment activities		
Change in valuation of derivative financial instruments	(52,669)	(51,945)

*Balances include reclassifications not related to the restatement.

NOTE 4. UTILITY PLANT

The summarized activity of SMUD's Utility Plant during 2016 is presented below:

	Balance December 31, 2015	Additions	Transfers and Disposals	Balance December 31, 2016
	(thousands of dollars)			
Nondepreciable Utility Plant:				
Land and land rights	$ 130,052	$ 5,324	$ (36)	$ 135,340
CWIP	176,071	217,050	(177,040)	216,081
Total nondepreciable utility plant	306,123	222,374	(177,076)	351,421
Depreciable Utility Plant:				
Generation	1,651,815	19,736	(1,864)	1,669,687
Transmission	301,944	3,521	(39)	305,426
Distribution	2,112,536	77,576	(10,626)	2,179,486
Investment in gas properties	206,579	42	-0-	206,621
Investment in JPAs	16,448	-0-	(799)	15,649
Intangibles	357,283	32,083	(1,317)	388,049
General	860,992	40,183	(20,080)	881,095
	5,507,597	173,141	(34,725)	5,646,013
Less: accumulated depreciation and depletion	(2,484,106)	(195,844)	33,403	(2,646,547)
Less: accumulated amortization on JPAs	(5,714)	(313)	-0-	(6,027)
	(2,489,820)	(196,157)	33,403	(2,652,574)
Total depreciable plant	3,017,777	(23,016)	(1,322)	2,993,439
Total Utility Plant - net	$ 3,323,900	$ 199,358	$ (178,398)	$ 3,344,860

The summarized activity of SMUD's Utility Plant during 2015 is presented below:

	Balance December 31, 2014	Additions	Transfers and Disposals	Balance December 31, 2015
	(thousands of dollars)			
Nondepreciable Utility Plant:				
Land and land rights	$ 127,914	$ 2,142	$ (4)	$ 130,052
CWIP	111,594	185,219	(120,742)	176,071
Total nondepreciable utility plant	239,508	187,361	(120,746)	306,123
Depreciable Utility Plant:				
Generation	1,632,980	15,917	2,918	1,651,815
Transmission	292,920	7,849	1,175	301,944
Distribution	2,052,254	64,313	(4,031)	2,112,536
Investment in gas properties	206,198	381	-0-	206,579
Investment in JPAs	14,165	2,283	-0-	16,448
Intangibles	346,268	11,925	(910)	357,283
General	902,314	20,562	(61,884)	860,992
	5,447,099	123,230	(62,732)	5,507,597
Less: accumulated depreciation and depletion	(2,349,241)	(197,462)	62,597	(2,484,106)
Less: accumulated amortization on JPAs	(5,401)	(313)	-0-	(5,714)
	(2,354,642)	(197,775)	62,597	(2,489,820)
Total depreciable plant	3,092,457	(74,545)	(135)	3,017,777
Total Utility Plant - net	$ 3,331,965	$ 112,816	$ (120,881)	$ 3,323,900

SMUD is planning a major renovation of its Headquarters building. In 2015, the building was vacated and SMUD retired many of the assets related to this building in the amount of $50.9 million. The retired assets were removed from Plant in Service and recorded against Accumulated Depreciation.

NOTE 5. INVESTMENT IN JOINT POWERS AGENCY

TANC. SMUD and fourteen other California municipal utilities are members of TANC, a JPA. TANC, along with the other California municipal utilities, own and operate the California-Oregon Transmission Project (COTP), a 500-kilovolt transmission line between central California and southern Oregon. SMUD is obligated to pay approximately 39.0 percent of TANC's COTP debt service and operations costs in exchange for entitlement to approximately 536 megawatts (MW) of TANC's 1,390 MW transfer capability. Additionally, SMUD has a 48 MW share of TANC's 300 MW firm, bi-directional transmission over PG&E's system between PG&E's Tesla and Midway substations (SOT). The total entitlement shares for the COTP and SOT described above include the long-term agreements listed below.

In 2009, SMUD entered into a 15-year long-term layoff agreement with TANC and certain members, expiring January 31, 2024. This agreement provides for the assignment of all rights and obligations of the City of Palo Alto and the City of Roseville related to their COTP and SOT entitlements. This agreement increased SMUD's COTP entitlement by 36 MW and SOT entitlement by 2 MW. Effective July 1, 2014, an amendment provides for the return to the City of Roseville of all rights and obligations related to the COTP entitlements, which decreased SMUD's COTP entitlement by 13 MW.

In 2014, SMUD entered into a 25-year long-term layoff agreement with TANC and certain members effective July 1, 2014. This agreement provides for the assignment of all rights and obligations of Northern California Power Agency and partial rights and obligations of the City of Santa Clara related to their COTP entitlements. This agreement increased SMUD's COTP entitlements by 130 MW.

The long-term debt of TANC, which totals $216.2 million (unaudited) at December 31, 2016, is collateralized by a pledge and assignment of net revenues of TANC supported by take or pay commitments of SMUD and other members. Should other members default on their obligations to TANC, SMUD would be required to make additional payments to cover a portion of such defaulted payments, up to 25 percent of its current obligation.

Copies of the TANC annual financial reports may be obtained from SMUD at P.O. Box 15830, Sacramento, California 95852.

SMUD recorded transmission expenses related to TANC of $15.7 million and $24.5 million in 2016 and 2015, respectively.

Summary financial information for TANC is presented below:

	December 31,	
	2016 (Unaudited)	2015 (Unaudited)
	(thousands of dollars)	
Total Assets	$ 336,742	$ 404,375
Total Deferred Outflows of Resources	4,140	3,262
Total Assets and Deferred Outflows of Resources	$ 340,882	$ 407,637
Total Liabilities	$ 327,296	$ 392,555
Total Deferred Inflows of Resources	-0-	44
Total Net Position	13,586	15,038
Total Liabilities, Deferred Inflows of Resources and Net Position	$ 340,882	$ 407,637
Changes in Net Position for the Six Months Ended December 31	$ 3	$ -0-

BANC. SMUD, City of Redding, City of Roseville, Modesto Irrigation District (MID), City of Shasta Lake, and Trinity Public Utilities District are members of BANC, a JPA formed in 2009. In 2011, operational control of Balancing Authority (BA) operations was transferred from SMUD to BANC. BANC performs FERC approved BA reliability functions that are managed by North American Electric Reliability Corporation (NERC), nationally, and by Western Electricity Coordinating Council functions in the west.

Copies of the BANC annual financial reports may be obtained from SMUD at P.O. Box 15830, Sacramento, California 95852.

SMUD recorded expenses related to BANC of $2.0 million in 2016 and $1.6 million in 2015.

Summary financial information for BANC is presented below:

	December 31,	
	2016 (Audited)	2015 (Audited)
	(thousands of dollars)	
Total Assets	$ 1,594	$ 824
Total Liabilities	$ 1,594	$ 824
Total Net Position	-0-	-0-
Total Liabilities and Net Position	$ 1,594	$ 824
Changes in Net Position for the Year Ended December 31	$ -0-	$ -0-

NOTE 6. COMPONENT UNITS

CVFA Carson Cogeneration Project. CVFA is a JPA formed by SMUD and the Sacramento Regional County Sanitation District. CVFA operates the Carson Project, a 65 MW (net) natural gas-fired cogeneration facility and a 43 MW (net) natural gas-fired simple cycle peaking plant. The revenue stream to pay the CVFA bonds' debt service is provided by a "take-or-pay" power purchase agreement between SMUD and CVFA.

SCA Procter & Gamble Cogeneration Project. SCA is a JPA formed by SMUD and the SFA. SCA operates the Procter & Gamble Project, a 136 MW (net) natural gas-fired cogeneration facility and a 50 MW (net) natural gas-fired simple cycle peaking plant. The revenue stream to pay the SCA bonds' debt service is provided by a "take-or-pay" power purchase agreement between SMUD and SCA.

SFA Cosumnes Power Plant Project. SFA is a JPA formed by SMUD and MID. SFA operates the Cosumnes Power Plant Project, a 501 MW (net) natural gas-fired, combined cycle facility. The revenue stream to pay the SFA bonds' debt service is provided by a "take-or-pay" power purchase agreement between SMUD and SFA.

SPA Campbell Soup Cogeneration Project. SPA is a JPA formed by SMUD and the SFA. SPA operates the Campbell Soup Project, a 160 MW (net) natural gas-fired cogeneration facility, and the McClellan Project, a 72 MW (net) natural gas-fired simple cycle peaking plant.

NCGA. NCGA is a JPA formed by SMUD and the SFA. NCGA has a prepaid gas contract with Morgan Stanley Capital Group (MSCG) expiring in 2027, which is financed primarily by NCGA revenue bonds. SMUD has contracted with NCGA to purchase all of the gas delivered by MSCG to NCGA, based on market prices. NCGA is obligated to pay the principal and interest on the bonds. Neither SMUD nor SFA is obligated to make debt service payments on the bonds. NCGA can terminate the prepaid gas contract under certain circumstances, including a failure by MSCG to meet its gas delivery obligation to NCGA or a drop in MSCG's credit rating below a specified level. If this occurs, MSCG will be required to make a termination payment to NCGA based on the unamortized prepayment proceeds received by MSCG.

As described in Note 2, all of the activities and balances of the component units are blended into and reported as part of SMUD because of the extent of their operational and financial relationships with SMUD. Copies of CVFA's, SCA's, SFA's, SPA's and NCGA's annual financial reports may be obtained from their Executive Office at P.O. Box 15830, Sacramento, California 95852 or online at SMUD.org.

The summarized activity of SMUD's component units for 2016 is presented below:

CONDENSED STATEMENTS OF NET POSITION
December 31, 2016
(thousands of dollars)

	CVFA	SCA	SFA	SPA	NCGA
Assets					
Electric Utility Plant - net	$ 51,674	$ 77,777	$ 234,671	$ 72,233	$ -0-
Restricted Assets	-0-	-0-	-0-	-0-	1
Current Assets	19,580	29,882	63,780	18,138	55,347
Noncurrent Assets	88	139	1,308	3	258,079
Total Assets	71,342	107,798	299,759	90,374	313,427
Deferred Outflows of Resources	505	758	3,528	-0-	-0-
Total Assets and Deferred Outflows of Resources	$ 71,847	$ 108,556	$ 303,287	$ 90,374	$ 313,427
Liabilities					
Long-Term Debt - net	$ 15,907	$ 25,549	$ 170,479	$ -0-	$ 264,475
Current Liabilities	13,321	14,440	61,612	8,256	35,279
Noncurrent Liabilities	9,726	-0-	-0-	-0-	-0-
Total Liabilities	38,954	39,989	232,091	8,256	299,754
Net Position	32,893	68,567	71,196	82,118	13,673
Total Liabilities and Net Position	$ 71,847	$ 108,556	$ 303,287	$ 90,374	$ 313,427

CONDENSED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
December 31, 2016
(thousands of dollars)

	CVFA	SCA	SFA	SPA	NCGA
Operating Revenues	$ 35,854	$ 56,602	$ 210,631	$ 44,719	$ 40,338
Operating Expenses	33,295	51,541	196,941	49,179	27,943
Operating Income	2,559	5,061	13,690	(4,460)	12,395
Non-Operating Revenues and Expenses					
Other Revenues	1,607	2,999	10,021	3,378	707
Interest Charges and Other	(1,169)	(1,618)	(4,670)	-0-	(12,973)
Change in Net Position Before Distributions and Contributions	2,997	6,442	19,041	(1,082)	129
Distribution to Member	-0-	-0-	-0-	-0-	(748)
Member Contributions and Adjustments	-0-	-0-	-0-	-0-	71
Change in Net Position	2,997	6,442	19,041	(1,082)	(548)
Net Position – Beginning of Year	29,896	62,125	52,155	83,200	14,221
Net Position – End of Year	$ 32,893	$ 68,567	$ 71,196	$ 82,118	$ 13,673

CONDENSED STATEMENTS OF CASH FLOWS
December 31, 2016
(thousands of dollars)

	CVFA	SCA	SFA	SPA	NCGA
Net Cash Provided by Operating Activities	$ 9,498	$ 15,257	$ 39,808	$ 8,661	$ 39,769
Net Cash Provided by (Used in) Noncapital Financing Activities	-0-	-0-	-0-	-0-	(39,893)
Net Cash Used in Capital Financing Activities	(8,965)	(11,328)	(38,835)	(7,028)	-0-
Net Cash Provided by Investing Activities	5	28	33	5	693
Net Increase in Cash and Cash Equivalents	538	3,957	1,006	1,638	569
Cash and Cash Equivalents at the Beginning of the Year	6,372	12,240	21,698	4,157	20,085
Cash and Cash Equivalents at the End of the Year	$ 6,910	$ 16,197	$ 22,704	$ 5,795	$ 20,654

The summarized activity of SMUD's component units for 2015 is presented below:

CONDENSED STATEMENTS OF NET POSITION
December 31, 2015
(thousands of dollars)

	CVFA	SCA	SFA	SPA	NCGA
Assets					
Electric Utility Plant - net	$ 53,394	$ 80,484	$ 244,251	$ 71,838	$ -0-
Current Assets	16,183	26,373	57,170	20,190	51,507
Noncurrent Assets	123	179	1,414	3	289,108
Total Assets	69,700	107,036	302,835	92,031	340,615
Deferred Outflows of Resources	775	1,071	4,098	-0-	-0-
Total Assets and Deferred Outflows of Resources	$ 70,475	$ 108,107	$ 306,933	$ 92,031	$ 340,615
Liabilities					
Long-Term Debt - net	$ 20,828	$ 31,316	$ 198,415	$ -0-	$ 292,870
Current Liabilities	10,680	14,666	56,363	8,831	33,524
Noncurrent Liabilities	9,071	-0-	-0-	-0-	-0-
Total Liabilities	40,579	45,982	254,778	8,831	326,394
Net Position	29,896	62,125	52,155	83,200	14,221
Total Liabilities and Net Position	$ 70,475	$ 108,107	$ 306,933	$ 92,031	$ 340,615

CONDENSED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
December 31, 2015
(thousands of dollars)

	CVFA	SCA	SFA	SPA	NCGA
Operating Revenues	$ 35,390	$ 61,255	$ 214,564	$ 55,209	$ 38,871
Operating Expenses	33,678	54,535	195,615	54,068	25,106
Operating Income	1,712	6,720	18,949	1,141	13,765
Non-Operating Revenues and Expenses					
Other Revenues	1	2	183	24	649
Interest Charges and Other	(1,401)	(1,856)	(9,280)	(1,856)	(13,981)
Change in Net Position Before Distributions and Contributions	312	4,866	9,852	(691)	433
Distribution to Member	-0-	(800)	(62,000)	(6,000)	(698)
Member Contributions and Adjustments	-0-	-0-	-0-	28,200	102
Change in Net Position	312	4,066	(52,148)	21,509	(163)
Net Position – Beginning of Year	29,584	58,059	104,303	61,691	14,384
Net Position – End of Year	$ 29,896	$ 62,125	$ 52,155	$ 83,200	$ 14,221

CONDENSED STATEMENTS OF CASH FLOWS
December 31, 2015
(thousands of dollars)

	CVFA	SCA	SFA	SPA	NCGA
Net Cash Provided by Operating Activities	$ 7,674	$ 14,269	$ 36,251	$ 8,453	$ 42,983
Net Cash Provided by (Used in) Noncapital Financing Activities	-0-	(800)	(62,000)	52,105	(38,589)
Net Cash Used in Capital Financing Activities	(6,675)	(9,851)	(37,294)	(74,998)	-0-
Net Cash Provided by Investing Activities	1	1	14,861	6,581	649
Net Increase (Decrease) in Cash and Cash Equivalents	1,000	3,619	(48,182)	(7,859)	5,043
Cash and Cash Equivalents at the Beginning of the Year	5,372	8,621	69,880	12,016	15,042
Cash and Cash Equivalents at the End of the Year	$ 6,372	$ 12,240	$ 21,698	$ 4,157	$ 20,085

NOTE 7. CASH, CASH EQUIVALENTS, AND INVESTMENTS

Cash Equivalents and Investments. SMUD's investment policy is governed by the California State and Municipal Codes and its Indenture, which allow SMUD's investments to include: obligations which are unconditionally guaranteed by the U.S. Government or its agencies or instrumentalities; direct and general obligations of the State or any local agency within the State; bankers' acceptances; commercial paper; certificates of deposit; repurchase agreements; corporate notes; and taxable government and tax-exempt money market portfolios. SMUD's investment policy includes restrictions for investments relating to maximum amounts invested as a percentage of total portfolio and with a single issuer, maximum maturities, and minimum credit ratings.

Credit Risk. This is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. To mitigate this risk, SMUD limits investments to those rated, at a minimum, "A-1" or equivalent for commercial paper and "A" or equivalent for medium-term corporate notes by a nationally recognized rating agency.

Custodial Credit Risk. This is the risk that, in the event of the failure of a depository financial institution or counterparty to a transaction, SMUD's deposits may not be returned or SMUD will not be able to recover the value of its deposits, investments or collateral securities that are in the possession of another party. SMUD does not have a deposit policy for custodial credit risk.

As of December 31, 2016 and 2015, $11.3 million and $23.2 million in deposits were uninsured, respectively. The bank balance is also, per a depository pledge agreement between SMUD and SMUD's bank, collateralized at 122 percent and 117 percent of the collective funds on deposit (increased by the amount of accrued but uncredited interest, reduced by deposits covered by FDIC) at December 31, 2016 and 2015, respectively. At December 31, 2016, SMUD had money market mutual funds of $111.3 million which were uninsured. At December 31, 2015, SMUD had money market mutual funds and a deposit account, totaling $109.3 million which were uninsured. SMUD's investments and money market mutual funds are held in SMUD's name.

Concentration of Credit Risk. This is the risk of loss attributed to the magnitude of an entity's investment in a single issuer. SMUD places no limit on the amounts invested in any one issuer for repurchase agreements and federal agency securities. The following are the concentrations of risk greater than five percent in either year:

	December 31,	
Investment Type:	2016	2015
Federal Home Loan Banks	19%	21%
Freddie Mac	34%	24%
Federal Farm Credit Bank	2%	7%
Corporate Note – Bank of New York	4%	7%
Corporate Note – Wells Fargo & Company	2%	9%
Corporate Note – Wells Fargo Bank	6%	4%

Interest Rate Risk. This is the risk of loss due to the fair value of an investment declining due to interest rates rising. Though SMUD has restrictions as to the maturities of some of the investments, it does not have a formal policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

The following schedules indicate the credit and interest rate risk at December 31, 2016 and 2015. The credit ratings listed are from Standard & Poors (S&P) or Moody's. (N/A is defined as not applicable to the rating disclosure requirements.)

At December 31, 2016, SMUD's cash, cash equivalents, and investments consist of the following:

Description	Credit Rating	Remaining Maturities (in years) Less Than 1	1-5	More than 5	Total Fair Value
		(thousands of dollars)			
Cash and Cash Equivalents:					
Cash	N/A	$ 1,614	$ -0-	$ -0-	$ 1,614
LAIF	Not Rated	130,689	-0-	-0-	130,689
Money Market Mutual Funds	AAAm	111,323	-0-	-0-	111,323
Deposit at Notice	N/A	2,446	-0-	-0-	2,446
Commercial Paper	A-1	16,700	-0-	-0-	16,700
Total cash and cash equivalents		262,772	-0-	-0-	262,772
Investments:					
Fannie Mae	AA+	-0-	19,488	-0-	19,488
Federal Farm Credit Bank	AA+	-0-	9,891	-0-	9,891
Federal Home Loan Bank	AA+	34,924	63,597	-0-	98,521
Freddie Mac	AA+	139,886	34,777	-0-	174,663
Financing Corp FICO	Aaa	-0-	13,808	-0-	13,808
U.S. Treasury Obligations	N/A	14,999	43,760	-0-	58,759
Corporate Notes	AAA/AA/AA-/A+/A	76,043	74,062	-0-	150,105
Municipal Bonds	AA-	23,082	-0-	-0-	23,082
Commercial Paper	AA-	10,408	-0-	-0-	10,408
Total investments		299,342	259,383	-0-	558,725
Total cash, cash equivalents, and investments		$ 562,114	$ 259,383	$ -0-	$ 821,497

At December 31, 2015, SMUD's cash, cash equivalents, and investments consist of the following:

Description	Credit Rating	Remaining Maturities (in years) Less Than 1	1-5	More than 5	Total Fair Value
		(thousands of dollars)			
Cash and Cash Equivalents:					
Cash	N/A	$ 19,861	$ -0-	$ -0-	$ 19,861
LAIF	Not Rated	119,223	-0-	-0-	119,223
Money Market Mutual Funds	AAAm/NR	72,102	-0-	-0-	72,102
Money Market Deposit Account	N/A	37,490	-0-	-0-	37,490
Deposit at Notice	N/A	1,593	-0-	-0-	1,593
Commercial Paper	A-1	12,314	-0-	-0-	12,314
Total cash and cash equivalents		262,583	-0-	-0-	262,583
Investments:					
Federal Farm Credit Bank	AA+	14,934	15,505	-0-	30,439
Federal Home Loan Bank	AA+	74,975	19,880	-0-	94,855
Freddie Mac	AA+	-0-	104,759	-0-	104,759
U.S. Treasury Obligations	N/A	8,197	14,945	-0-	23,142
Corporate Notes	AA+/AA/A+/A	109,796	66,643	-0-	176,439
Municipal Bonds	AA/AA-	1,500	23,745	-0-	25,245
Total investments		209,402	245,477	-0-	454,879
Total cash, cash equivalents, and investments		$ 471,985	$ 245,477	$ -0-	$ 717,462

SMUD's cash, cash equivalents, and investments are classified in the Consolidated Statements of Net Position as follows:

	December 31,	
	2016	2015
	(thousands of dollars)	
Total Cash, Cash Equivalents, and Investments:		
Revenue bond reserve and debt service funds:		
Revenue bond reserve fund	$ 7,395	$ 7,395
Debt service fund	68,964	67,545
Component unit bond reserve and debt service funds	39,106	39,291
Total revenue bond reserve and debt service funds	115,465	114,231
Nuclear decommissioning trust fund	8,357	8,292
Rate stabilization fund	35,154	30,251
Component unit other restricted funds	3,777	4,228
Escrow fund	6,056	1,200
Other restricted funds	654	3,834
Unrestricted funds	652,034	555,426
Total cash, cash equivalents, and investments	$ 821,497	$ 717,462

NOTE 8. REGULATORY DEFERRALS

The Board has taken various regulatory actions that result in differences between the recognition of revenues and expenses for rate-making purposes and their treatment under generally accepted accounting principles for non-regulated entities (see Note 2). These actions result in regulatory assets and liabilities, which are summarized in the tables below. Changes to these balances, and their inclusion in rates, occur only at the direction of the Board.

Regulatory Assets (Costs)

Decommissioning. SMUD's regulatory asset relating to the unfunded portion of its decommissioning liability is being collected through interest earnings on the Trust Fund. Nuclear fuel storage costs and non-radiological decommissioning costs have been collected in rates since 2009.

Derivative Financial Instruments. SMUD's regulatory costs and/or credits relating to investment derivative instruments are intended to defer the net difference between the fair value of derivative instruments and their cost basis, if any. Investment derivative instruments are reflected in rates at contract cost and as such, the balance is charged or credited into rates as the related asset or liability is utilized (see Note 9).

Senate Bill 1. SMUD implemented a per kilowatt hour solar surcharge, effective January 1, 2008 in order to fund investments in solar required by Senate Bill 1 (SB-1). The difference between the surcharge revenues received and the funds spent on solar initiatives will be recognized or deferred into future years. In 2016, SMUD spent less than it collected in SB-1 revenues and has recorded a regulatory credit.

Debt Issuance Costs. SMUD established a regulatory asset for costs incurred in connection with the issuance of debt obligations, principally underwriter fees and legal costs. The regulatory asset will be amortized through 2017 for the portion related to SMUD's debt issuance costs and over the life of the bonds for the portion related to the component units' debt issuance costs. Debt issuance costs after December 31, 2013 are expensed.

Pension. SMUD established a regulatory asset for pension costs related to the implementation of GASB No. 68 which requires SMUD to record a net pension liability. The regulatory asset will be amortized over a period of 25 years starting in 2018.

SMUD's total regulatory costs for future recovery are presented below:

	December 31, 2016	December 31, 2015
	(thousands of dollars)	
Regulatory Costs:		
Decommissioning	$ 149,258	$ 149,192
Derivative financial instruments	15,567	31,957
Senate Bill 1	-0-	3,217
Debt issuance costs	7,913	13,300
Pension	425,680	425,680
Total regulatory costs	598,418	623,346
Less: regulatory costs to be recovered within one year	(11,523)	(21,242)
Total regulatory costs for future recovery - net	$ 586,895	$ 602,104

Regulatory Credits

CIAC. In 2016 and 2015, SMUD added CIAC totaling $15.6 million and $16.9 million, respectively, to Regulatory Credits in the Consolidated Statements of Net Position and recorded $11.4 million and $10.9 million of amortization, respectively, to Other Income - Net in the Consolidated Statements of Revenues, Expenses and Changes in Net Position. SMUD's regulatory credit relating to CIAC is intended to offset the revenue and expense associated with this accounting treatment. Thus, this regulatory credit is being amortized into rates over the depreciable lives of the related assets in order to offset the earnings effect of these non-exchange transactions.

Rate Stabilization. SMUD's regulatory credit relating to Rate Stabilization is intended to defer the need for future rate increases when costs exceed existing rates. At the direction of the Board, amounts may be either transferred into this fund (which reduces revenues), or amounts are transferred out of this fund (which increases revenues). The Board authorizes Rate Stabilization Fund (RSF) transfers on an event driven basis. In 2016, $5.1 million was transferred from the RSF to revenue as a result of lower than budgeted energy deliveries from Western Area Power Administration (Western).

Hydro Rate Stabilization. The Hydro Rate Stabilization Fund (HRSF) was established through the Hydro Generation Adjustment (HGA) mechanism, which helps manage volatility in energy costs. The HGA mechanism applies a formula based on precipitation and wholesale electricity prices to calculate needed withdrawals from or deposits to the HRSF. The maximum balance of the HRSF is 5 percent of the budgeted retail revenue and the maximum annual transfer in or out of the HRSF is 4 percent of budgeted retail revenue. If the HRSF is depleted, SMUD will apply a hydro rate surcharge to customers' bills up to 4 percent. When the HRSF is fully replenished, a wet year can trigger a hydro rebate or credit on the customers' bills. In 2016, $10.0 million was transferred from revenue to the HRSF as a result of high precipitation.

Energy Assistance Program Rate (EAPR). In 2016, The Board authorized SMUD to transfer $10.0 million of revenue to a regulatory credit related to EAPR. This regulatory credit is intended to offset future expenditures for energy efficiency programs for EAPR customers from the period 2017-2020.

Grant Revenues. In 2009, SMUD was awarded several large grants under the ARRA, which provided large amounts of reimbursements for capital expenditures. In 2010, the Board authorized the deferral of grant income for capital expenditures as regulatory liabilities. Thus, this regulatory credit will be deferred to match the depreciable lives of the related capital assets in order to offset the earnings effect of these non-exchange transactions.

TANC Operations Costs. SMUD's regulatory asset relating to deferred TANC costs comprises the difference between its cash payments made to TANC and its share of TANC's accrual-based costs of operations. This regulatory asset is being collected in rates over the life of TANC's assets during the period that cash payments to TANC exceed TANC's accrual-based costs. SMUD's cash payments to TANC exceeded TANC's accrual-based costs and SMUD has recorded a regulatory credit.

SMUD's total regulatory credits for future revenue recognition are presented below:

	December 31,			
	2016		2015	
	(thousands of dollars)			
Regulatory Credits:				
CIAC	$	251,623	$	247,413
Rate stabilization		25,188		30,251
Hydro rate stabilization		9,966		-0-
EAPR		10,000		-0-
Senate Bill 1		1,925		-0-
Grant revenues		52,535		59,949
TANC operations costs		18,975		16,208
Total regulatory credits	$	370,212	$	353,821

NOTE 9. DERIVATIVE FINANCIAL INSTRUMENTS

To help provide stable electric rates and to meet the forecasted power needs of its retail customers reliably, SMUD enters into various physical and financial fixed price purchase contracts for electricity and natural gas. These fixed price contracts and swap agreements are intended to hedge the exposure due to highly volatile commodity prices. SMUD also enters into interest rate swap agreements to reduce interest rate risk. SMUD utilizes these derivative financial instruments to mitigate its exposure to certain market risks associated with ongoing operations. SMUD has established policies set by an executive committee for the use of derivative financial instruments for trading purposes. These contracts are evaluated pursuant to SGAS No. 53 ***"Accounting and Financial Reporting for Derivative Instruments"*** (GASB No. 53) to determine whether they meet the definition of derivative instruments, and if so, whether they effectively hedge the expected cash flows associated with interest rate and commodity price risk exposures.

SMUD applies hedge accounting for derivatives that are deemed effective hedges. Under hedge accounting, the increase or (decrease) in the fair value of a hedge is reported as a Deferred Inflow or Deferred Outflow on the Consolidated Statements of Net Position. Derivatives that do not meet the effectiveness tests are deferred for rate-making purposes as regulatory assets or liabilities on the Consolidated Statements of Net Position (see Note 8).

During 2016 and 2015, SMUD executed numerous new gas and power related purchase agreements, some of which are recorded as hedging or investment derivatives and are therefore included in the following table. All hedging or investment derivatives are recorded at fair value on the Consolidated Statements of Net Position.

For electricity and gas derivatives, fair values are estimated by comparing contract prices to forward market prices quoted by an independent external pricing service. When external quoted market prices are not available for derivative contracts, SMUD uses an internally developed valuation model utilizing short term observable inputs. For interest rate derivatives, SMUD calculates the fair value by discounting the expected cash flows at their corresponding zero coupon rate.

The following is a summary of the fair values, changes in fair value and notional amounts of derivative instruments, grouped by trading strategy, outstanding at December 31, 2016 (amounts in thousands; gains shown as positive amounts, losses as negative):

	2016 Changes in Fair Value		Fair Value at December 31, 2016		
	Current Amount	Noncurrent Amount	Current Amount	Noncurrent Amount	Notional
Cash Flow Hedges:					
(thousands of dollars)					
(thousands of Dekatherms (Dth))					
Asset: Investment Derivative Instruments					
Gas – Commodity	$ 401	$ 175	$ 401	$ 175	1,795 Dth
Gas – Transportation	19	-0-	19	-0-	380 Dth
Total Investment Derivative Instruments	$ 420	$ 175	$ 420	$ 175	
Asset: Hedging Derivative Instruments					
Gas – Basis	$ (323)	$ -0-	$ -0-	$ -0-	
Gas – Commodity	29	622	833	622	7,013 Dth
Gas – Storage	298	-0-	343	-0-	1,428 Dth
Gas – Transportation	(237)	-0-	47	-0-	2,600 Dth
Interest Rate	374	(1,954)	6,658	19,767	$331,190
Total Hedging Derivative Instruments	$ 141	$ (1,332)	$ 7,881	$ 20,389	
Liability: Investment Derivative Instruments					
Gas – Basis	$ (34)	$ -0-	$ 34	$ -0-	225 Dth
Gas – Commodity	4,785	5,949	2,259	1,255	6,885 Dth
Gas – Transportation	(30)	-0-	30	-0-	155 Dth
Interest Rate	1,337	3,787	4,198	8,386	$151,830
Total Investment Derivative Instruments	$ 6,058	$ 9,736	$ 6,521	$ 9,641	
Liability: Hedging Derivative Instruments					
Gas – Basis	$ (352)	$ -0-	$ 515	$ -0-	5,925 Dth
Gas – Commodity	37,062	37,761	27,387	96,661	104,117 Dth
Gas – Storage	190	-0-	191	-0-	930 Dth
Gas – Transportation	66	-0-	141	-0-	1,458 Dth
Total Hedging Derivative Instruments	$ 36,966	$ 37,761	$ 28,234	$ 96,661	

The following is a summary of the fair values, changes in fair value and notional amounts of derivative instruments, grouped by trading strategy, outstanding at December 31, 2015 (amounts in thousands; gains shown as positive amounts, losses as negative):

	2015 Changes in Fair Value		Fair Value at December 31, 2015		
	Current Amount	Noncurrent Amount	Current Amount	Noncurrent Amount	Notional
Cash Flow Hedges:					
(thousands of dollars)					
(thousands of Dekatherms (Dth))					
Asset: Investment Derivative Instruments					
Gas – Transportation	$ (39)	$ -0-	$ -0-	$ -0-	
Total Investment Derivative Instruments	$ (39)	$ -0-	$ -0-	$ -0-	
Asset: Hedging Derivative Instruments					
Gas – Basis	$ (237)	$ (179)	$ 323	$ -0-	1,830 Dth
Gas – Commodity	(56)	-0-	804	-0-	1,293 Dth
Gas – Storage	3	-0-	45	-0-	233 Dth
Gas – Transportation	(739)	(149)	284	-0-	1,830 Dth
Interest Rate	(256)	(3,654)	6,284	21,721	$131,030
Total Hedging Derivative Instruments	$ (1,285)	$ (3,982)	$ 7,740	$ 21,721	
Liability: Investment Derivative Instruments					
Gas – Basis	$ 331	$ -0-	$ -0-	$ -0-	
Gas – Commodity	(2,455)	(2,976)	7,044	7,204	10,443 Dth
Interest Rate	1,840	3,487	5,535	12,173	$192,430
Total Investment Derivative Instruments	$ (284)	$ 511	$ 12,579	$ 19,377	
Liability: Hedging Derivative Instruments					
Gas – Basis	$ 2,127	$ -0-	$ 163	$ -0-	465 Dth
Gas – Commodity	(15,079)	(34,116)	64,449	134,422	111,609 Dth
Gas – Storage	(363)	-0-	381	-0-	1,835 Dth
Gas – Transportation	(158)	-0-	207	-0-	1,240 Dth
Total Hedging Derivative Instruments	$ (13,473)	$ (34,116)	$ 65,200	$ 134,422	

Objectives and Terms of Hedging Derivative Instruments. The objectives and terms of SMUD's hedging derivative instruments that were outstanding at December 31, 2016 are summarized in the table below. The table is aggregated by the trading strategy. Credit ratings of SMUD's counterparties can be found in the table under Credit Risk. Details of SMUD's interest rate derivative instruments can be found in Note 10.

	Notional Amount Dth	Beginning Date	Ending Date	Minimum Price/Dth	Maximum Price/Dth
Gas – Basis	5,925	01/01/17	12/31/17	$ (0.99)	$ (0.96)
Gas – Commodity	111,130	01/01/08	12/31/22	2.75	7.17
Gas – Storage	2,358	01/01/17	03/31/17	.10	.43
Gas – Transportation	4,058	01/01/17	03/31/17	(0.18)	.11

The objectives and terms of SMUD's hedging derivative instruments that were outstanding at December 31, 2015 are summarized in the table below. The table is aggregated by the trading strategy.

	Notional Amount Dth	Beginning Date	Ending Date	Minimum Price/Dth	Maximum Price/Dth
Gas – Basis	2,295	01/01/16	12/31/16	$ (0.82)	$ (0.25)
Gas – Commodity	112,902	01/01/08	12/31/22	2.82	7.17
Gas – Storage	2,068	01/01/16	12/31/16	.15	.62
Gas – Transportation	3,070	01/01/16	12/31/16	(0.19)	.29

SMUD hedges its interest rate exposure with several swaps. One swap is used to convert some of the interest expense associated with fixed rate bonds to a variable rate interest expense. SMUD also has two forward starting swaps that are designed to partially fix the interest expense associated with variable rate bonds (see Note 10).

SMUD hedges its power and natural gas costs so that it can offer predictable rates to its retail electric customers and support its credit rating. SMUD maintains a risk management program to control the price, credit, and operational risks arising from its power and natural gas market activities. Under the program, authorized SMUD employees assemble a portfolio of swaps, futures, and forward contracts over time with the goal of making SMUD's purchased power and fuel budget more predictable.

These hedged risks include those related to interest rate and commodity price fluctuations associated with certain forecasted transactions, including interest rate risk on long-term debt, and forward purchases of gas and electricity to meet load.

Derivatives Not Designated as Hedging Instruments

Gas and Electric Contracts. SMUD utilizes certain gas swap and electric swap agreements under GASB No. 53 not designated as hedging derivative instruments to mitigate exposure to changes in the market price of natural gas and electricity. The fair value of each agreement, excluding the actual settlements to be paid or received as of the end of the period, is recorded on the Consolidated Statements of Net Position in either Current or Noncurrent Assets, Investment Derivative Instruments if in an asset position or Current or Noncurrent Liabilities, Investment Derivative Instruments if in a liability position. An offsetting amount is included in Current or Noncurrent Regulatory Costs or Regulatory Credits for future recovery in the Consolidated Statements of Net Position. The actual settlement payable is recorded in Accounts Payable on the Consolidated Statements of Net Position, and the actual settlement receivable is recorded in Receivables – Net: Other on the Consolidated Statements of Net Position. The payments and receipts of the actual settlement are recorded as Investment Expense in the Consolidated Statements of Revenues, Expenses and Changes in Net Position.

Interest Rate Contracts. SMUD utilizes certain interest rate swap agreements not designated as hedging derivative instruments under GASB No. 53 to mitigate exposure to fluctuations in interest rates. The fair value of each agreement, excluding the balance of interest to be paid or received as of the end of the period, is recorded on the Consolidated Statements of Net Position in either Current or Noncurrent Assets, Investment Derivative Instruments if in an asset position or Current or Noncurrent Liabilities, Investment Derivative Instruments if in a liability position. An offsetting amount is included in Current or Noncurrent Regulatory Costs or Deferred Outflows or Inflows of Resources in the Consolidated Statements of Net Position. The interest receivable is recorded in Receivables – Net: Other on the Consolidated Statements of Net Position, and the accrued interest is recorded in Interest Payable on the Consolidated Statements of Net Position. The payments or receipts of the actual settlement are recorded as Investment Expense in the Consolidated Statements of Revenues, Expenses and Changes in Net Position.

The Board has deferred recognition of the effects of reporting the fair value of Investment Derivative Instruments for rate-making purposes, and maintains regulatory accounts to defer the accounting impact of these accounting adjustments (see Note 8). Market values may have changed significantly since December 31, 2016.

Interest Rate Risk. This is the risk that changes in interest rates will adversely affect the fair values of SMUD's interest rate swaps. SMUD is exposed to interest rate risk on its interest rate swaps.

Basis Risk. This is the risk that arises when a hedged item and a derivative that is attempting to hedge that item are based on different indices. SMUD is exposed to basis risk when it hedges its natural gas purchases, which are priced at various locations, and with NYMEX futures contracts, which settle based on the price at Henry Hub, Louisiana. SMUD enters into basis swaps to hedge against this risk.

Termination Risk. This is the risk that a derivative will terminate prior to its scheduled maturity due to a contractual event. Contractual events include bankruptcy, illegality, default, credit events upon merger, and other events. One aspect of termination risk is that SMUD would lose the hedging benefit of a derivative that becomes subject to a termination event. Another aspect of termination risk is that, if at the time of termination the mark to market value of the derivative was a liability to SMUD, SMUD could be required to pay that amount to the counterparty. Termination risk is associated with all of SMUD's derivatives up to the fair value amounts.

Credit Risk. This is the risk of loss resulting when the counterparty is unable or unwilling to fulfill its present and future financial obligations. SMUD can be exposed to significant counterparty credit risk on all derivative instruments. SMUD seeks to minimize credit risk by transacting with creditworthy counterparties. SMUD has established and maintained strict counterparty credit guidelines. SMUD continuously monitors counterparty credit risk and utilizes numerous counterparties to diversify the exposure to potential defaults. Under certain conditions as outlined in SMUD's credit risk management policy, SMUD may require additional credit support under its trading agreements.

Some of SMUD's derivative master agreements contain credit contingent provisions that enable SMUD to maintain unsecured credit as a result of positive investment quality credit ratings from each of the major credit rating agencies. If SMUD's credit rating were to be downgraded, there could be a step-down in SMUD's unsecured credit thresholds, and SMUD's counterparties would require additional collateral. If SMUD's credit rating were to decrease below investment grade, SMUD's unsecured credit thresholds would be reduced to zero, and counterparties to the derivative instruments would demand ongoing full collateralization on derivative instruments in net out of the money positions (see Note 2).

The counterparties' current credit rating at December 31, 2016 is shown in the table below. The credit ratings listed are from S&P or Moody's.

Counterparty Gas Contracts:	Counterparty Credit Rating
Barclays Bank PLC	A-
Bank of Montreal	A+
Cargill Inc.	A
Citigroup Inc.	BBB+
J.P. Morgan Ventures Energy Corp.	A-
Macquarie Bank Limited	A
Merrill Lynch	Baa1
Morgan Stanley Capital Group, Inc.	BBB+
Royal Bank of Canada	AA-
Interest Rate Contracts:	
Goldman Sachs Capital Markets, L.P.	BBB+
Goldman Sachs Mitsui Marine Derivative Products, L.P.	AA-
Morgan Stanley Capital Services, Inc.	BBB+
Wells Fargo & Company	AA-
Bank of America Corporation	A+

NOTE 10. LONG-TERM DEBT

SMUD's total long-term debt is presented below:

	December 31,	
	2016	2015
	(thousands of dollars)	
Electric revenue bonds, 3.0%-6.32%, 2017-2041	$ 1,676,315	$ 1,786,080
Subordinated electric revenue bonds, index rates, 2017-2041	341,850	344,850
Total electric revenue bonds	2,018,165	2,130,930
Component unit project revenue bonds, 3.0%-5.25%, 2017-2030	220,925	253,375
Gas supply prepayment bonds, index rates, 2007-2027	292,870	318,795
Total long-term debt outstanding	2,531,960	2,703,100
Bond premiums - net	133,275	123,080
Total long-term debt	2,665,235	2,826,180
Less: amounts due within one year	(160,585)	(152,060)
Total long-term debt - net	$ 2,504,650	$ 2,674,120

The summarized activity of SMUD's long-term debt during 2016 is presented below:

	December 31, 2015	Additions	Payments or Amortization	December 31, 2016	Amounts Due Within One Year
			(thousands of dollars)		
Electric revenue bonds	$ 1,786,080	$ 149,890	$ (259,655)	$ 1,676,315	$ 95,155
Subordinate electric revenue bonds	344,850	341,850	(344,850)	341,850	3,000
Component unit project revenue bonds	253,375	-0-	(32,450)	220,925	34,035
Gas supply prepayment bonds	318,795	-0-	(25,925)	292,870	28,395
Total	2,703,100	491,740	(662,880)	2,531,960	$ 160,585
Unamortized premiums - net	123,080	36,437	(26,242)	133,275	
Total long-term debt	$ 2,826,180	$ 528,177	$ (689,122)	$ 2,665,235	

The summarized activity of SMUD's long-term debt during 2015 is presented below:

	December 31, 2014	Additions	Payments or Amortization	December 31, 2015	Amounts Due Within One Year
			(thousands of dollars)		
Electric revenue bonds	$ 1,873,105	$ -0-	$ (87,025)	$ 1,786,080	$ 90,685
Subordinate electric revenue bonds	347,850	-0-	(3,000)	344,850	3,000
Component unit project revenue bonds	373,670	193,335	(313,630)	253,375	32,450
Gas supply prepayment bonds	342,480	-0-	(23,685)	318,795	25,925
Total	2,937,105	193,335	(427,340)	2,703,100	$ 152,060
Unamortized premiums - net	115,026	30,373	(22,319)	123,080	
Total long-term debt	$ 3,052,131	$ 223,708	$ (449,659)	$ 2,826,180	

At December 31, 2016 scheduled annual principal maturities and interest are as follows:

	Principal	Interest	Total
		(thousands of dollars)	
2017	$ 160,585	$ 115,438	$ 276,023
2018	150,010	107,548	257,558
2019	154,145	101,906	256,051
2020	138,160	95,602	233,762
2021	141,730	89,613	231,343
2022 – 2026 (combined)	719,530	358,984	1,078,514
2027 – 2031 (combined)	481,735	210,416	692,151
2032 – 2036 (combined)	450,095	96,526	546,621
2037 – 2041 (combined)	135,970	16,785	152,755
Total Requirements	$ 2,531,960	$ 1,192,818	$ 3,724,778

Interest in the preceding table includes interest requirements for fixed rate debt at their stated rates, variable rate debt covered by interest rate swaps at their fixed rate, and variable rate debt not covered by interest rate swaps using the debt interest rate of 70 percent of 1 month London Interbank Offered Rate (LIBOR) plus a fixed fee. The LIBOR rate is based on the rate in effect at December 31, 2016 for the issues.

The following bonds have been issued and are outstanding at December 31, 2016:

Date	Issue	Final Maturity	Interest Rate	Original Amount	Outstanding Amount
Electric Revenue Bonds					
06/15/1997	1997 Series K Bonds	07/01/2024	5.25% - 5.9%	$ 131,030,000	$ 131,030,000
06/09/2008	2008 Series U Bonds	08/15/2028	3.0% - 5.0%	521,730,000	256,490,000
05/15/2009	2009 Series V Bonds	05/15/2036	6.322%	200,000,000	200,000,000
07/29/2010	2010 Series W Bonds	05/15/2036	6.156%	250,000,000	250,000,000
10/04/2011	2011 Series X Bonds	08/15/2028	1.5% - 5.0%	325,550,000	243,825,000
05/31/2012	2012 Series Y Bonds	08/15/2033	3.0% - 5.0%	196,945,000	191,175,000
05/21/2013	2013 Series A Bonds	08/15/2041	3.75% - 5.0%	132,020,000	132,020,000
05/21/2013	2013 Series B Bonds	08/15/2033	3.0% - 5.0%	118,615,000	118,615,000
08/20/2013	2013 Series C Bonds	08/15/2017	5.0%	57,780,000	3,270,000
07/14/2016	2016 Series D Bonds	08/15/2028	2.0% - 5.0%	149,890,000	149,890,000
JPA Electric Revenue Bonds					
08/19/2009	2009 CVFA Bonds	07/01/2020	2.25% - 5.25%	$ 48,920,000	$ 20,285,000
08/19/2009	2009 SCA Bonds	07/01/2021	4.0% - 5.25%	57,530,000	30,100,000
06/03/2015	2015 SFA Bonds	07/01/2030	2.0% - 5.0%	193,335,000	170,540,000
05/31/2007	2007B NCGA#1 Bonds	07/01/2027	Index Rate	668,470,000	292,870,000
Subordinated Electric Revenue Bonds					
10/27/2016	2016 Series N Bonds	08/15/2041	Index Rate	$ 72,000,000	$ 72,000,000
10/27/2016	2016 Series O Bonds	08/15/2041	Index Rate	72,000,000	72,000,000
11/16/2016	2016 Series P Bonds	08/15/2028	Index Rate	120,000,000	120,000,000
11/16/2016	2016 Series Q Bonds	08/15/2028	Index Rate	77,850,000	77,850,000

2016 Bond Refunding. In June 2016, SMUD issued $149.9 million of 2016 Series D Electric Revenue Refunding Bonds. Proceeds from the 2016 Series Bonds were used to refund $125.4 million of the outstanding 2008 Series U Bonds, and $43.6 million of outstanding 2011 Series X Bonds, through a legal defeasance, and accordingly, the liability for the defeased bonds has been removed from Long-Term Debt in the Consolidated Statements of Net Position. The refunding resulted in the recognition of a deferred accounting loss of $12.6 million, which is being amortized over the life of the refunding issue. The 2016 refunding reduced future aggregate debt service payments by $27.2 million and resulted in a total economic gain of $23.4 million, which is the difference between the present value of the old and new debt service payments.

2016 Conversion to Direct Placement. In October and November of 2016, SMUD completed transactions to convert all of the outstanding 2008 Series J, 2008 Series K, 2012 Series L, and 2012 Series M Bonds to direct placements, totaling $341.9 million (see Direct Purchase Agreements below). As part of each transaction, new bonds were issued to defease the old bonds, and as a result, the reimbursement agreements with Bank of America, State Street, and US Bank were terminated. The scheduled principal payments remain unchanged unless the bonds aren't successfully remarketed at the end of the term. Accordingly, SMUD has recorded such bonds as Long-Term Debt, less amounts due within one year in the Consolidated Statements of Net Position. No additional deferred gain or loss or economic gain resulted from these transactions.

2015 Bond Refunding. In June 2015, SFA issued $193.3 million of 2015 Series Cosumnes Project Revenue Refunding Bonds. Proceeds from the 2015 Series Bonds and $24.8 million of available funds were used to refund $233.2 million of the outstanding 2006 Series Bonds through a legal defeasance, and accordingly, the liability for the defeased bonds has been removed from Long-Term Debt in the Consolidated Statements of Net Position. The refunding resulted in the recognition of a deferred accounting loss of $4.4 million, which is being amortized over the life of the refunding issue, and a current period loss of $0.03 million which is included in Interest on Debt in the Consolidated Statement of Revenues, Expenses, and Changes in Net Assets. The 2015 refunding reduced future aggregate debt service payments by $46.7 million and resulted in a total economic gain of $35.5 million, which is the difference between the present value of the old and new debt service payments.

2015 Bond Redemptions. In January and July 2015, SPA redeemed $29.9 million and the remaining $33.8 million of 2005 Series Bonds maturing July 2016 through July 2022, along with the accrued interest, respectively. The redemptions resulted in a current accounting loss of $0.2 million, which is included in Interest on Debt in the Consolidated Statements of Revenues, Expenses and Changes in Net Position.

Interest Rate Swap Agreements. A summary of SMUD's five interest rate swap agreements are as follows. The credit ratings listed are from S&P,

Notional Amount (thousands)	SMUD Pays	Fixed Rate	Floating Rate	Termination Date	Counterparty Credit Rating
$ 131,030	Variable	5.154%	SIFMA	07/01/24	BBB+
50,755	Fixed	4.345%	70% of LIBOR	08/15/18	AA-
101,075	Fixed	2.894%	63% of LIBOR	08/15/28	BBB+
79,714	Fixed	1.172%	70% of LIBOR	08/15/28	AA-
120,446	Fixed	1.113%	70% of LIBOR	08/15/28	A+

SMUD has a fixed-to-variable interest rate swap agreement with a notional amount of $131.0 million, which is equivalent to the principal amount of SMUD's 1997 Series K Electric Revenue Bonds. Under this swap agreement, SMUD pays a variable rate equivalent to the Securities Industry and Financial Markets Association (SIFMA) Index (0.72 percent at December 31, 2016) and receives fixed rate payments of 5.154 percent. In connection with the swap agreement, SMUD has a put option agreement, also with a notional amount of $131.0 million, which gives the counterparty the right to sell to SMUD, at par, either the 1997 Series K Bonds, or a portfolio of securities sufficient to defease the 1997 Series K Bonds. SMUD receives fixed rate payments of 0.268 percent in connection with the put option agreement. The exercise of the option terminates the swap at no cost to SMUD. The term of both the swap and the put is equal to the maturity of the 1997 Series K Bonds.

SMUD has two variable-to-fixed interest rate swap agreements with a combined notional amount of $151.8 million originally entered into for the purpose of fixing the effective interest rate associated with certain of its subordinated bonds that were refunded during 2008. The notional values of the two swaps are amortized over the life of the respective swap agreements. SMUD can terminate all swap agreements at any time, with payment or receipt of the fair market value of the swaps as of the date of termination. 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.

Additionally, in June 2016, SMUD executed variable-to-fixed interest rate swap agreements with Wells Fargo and Bank of America with a combined notional amount of $200.2 million. These were entered into for the purpose of fixing the effective interest rate associated with subordinated bonds that are expected to be issued in July of 2018. The swaps do not take effect until July 12, 2018. The notional values of the two swaps are amortized over the life of their respective swap agreements. SMUD can terminate both swap agreements at any time, with payment or receipt of the fair market value of the swaps as of the date of termination. Additionally, on August 15, 2023 and for the remaining life of the swaps, the swaps can be terminated at no cost to SMUD. 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.

Component Unit Interest Rate Swap Agreements. NCGA has three interest rate swap agreements, which are summarized as follows. The credit ratings listed are from S&P.

Notional Amount (thousands)	NCGA Pays	Fixed Rate	Floating Rate	Termination Date	Credit Support Provider Credit Rating
$ 28,395	Fixed	4.062%	67% of LIBOR +.60%	07/01/17	BBB+
65,865	Fixed	4.144%	67% of LIBOR +.63%	07/01/19	BBB+
198,610	Fixed	4.304%	67% of LIBOR +.72%	07/01/27	BBB+

At December 31, 2016 NCGA had three variable-to-fixed interest rate swap agreements with a counterparty for the purpose of fixing the effective interest rate associated with the 2007 Series B Bonds. NCGA pays the counterparty a fixed rate on the notional amount and receives a floating rate equal to 67 percent of the three month LIBOR (1.0 percent at December 31, 2016) plus an interest rate spread, as specified in each swap agreement. The total notional amount of the three swaps at December 31, 2016 was $292.9 million and was equivalent to the outstanding principal balance on the NCGA Bonds. The swaps are amortized over the life of their respective swap agreements in a manner corresponding to the principal repayment schedule of the NCGA Bonds. Early termination of the swaps would occur upon termination of the prepaid agreement for any reason. Upon early termination, the swaps would have no value to either party.

Subordinated Electric Revenue Bonds. Payment of and interest on the Subordinated Electric Revenue Bonds is subordinate to the payment of the principal and interest on SMUD's Electric Revenue Bonds.

Direct Purchase Agreements. On October 31, 2016, SMUD completed two transactions in which US Bank and State Street purchased all of the outstanding 2012 Series L and Series M Bonds, respectively. As a result of these transactions, SMUD issued the 2016 Series N and the Series O Bonds for the purpose of defeasing the 2012 Series L and Series M bonds, respectively. SMUD pays interest on both series on a monthly basis at the rate of 70 percent of one-month LIBOR plus a fixed fee. The terms are three and a half years, at the end of which SMUD can remarket the bonds, utilize another interest rate mode, or if remarketing is unsuccessful, pay the bonds over five years. The scheduled principal payments for the 2016 Series N and Series O bonds are the same as the defeased 2012 Series L and Series M bonds, respectively, unless the bonds aren't successfully remarketed at the end of the term.

On November 16, 2016 SMUD completed a transaction in which Bank of America purchased all of the outstanding 2008 Series J and 2008 Series K Bonds. As a result of this transaction, the bonds have been renamed the 2016 Series P and the 2016 Series Q Bonds, and SMUD pays interest on a monthly basis at the rate of 70 percent of one-month LIBOR plus a fixed fee. The term is three years, at the end of which SMUD can remarket the bonds, utilize another interest rate mode, or if remarketing is unsuccessful, pay the bonds over five years. The scheduled principal payments remain unchanged unless the bonds aren't successfully remarketed at the end of the term.

Component Unit Bonds. The component units of SMUD have each issued bonds to finance their respective projects. The revenue stream to pay CVFA, SCA, and SFA bonds' debt service is provided by "take-or-pay" power purchase agreements, and is therefore not dependent on the successful operation of the projects. SMUD guarantees to make payments sufficient to pay principal and interest and all other payments required to be made under the CVFA's, SCA's, and SFA's indenture of trust. CVFA, SCA, and SFA are not required to repay SMUD for any amounts paid under this guarantee. The revenue stream to pay NCGA bonds' debt service is provided by a "take-and-pay" purchase agreement. Therefore, principal and interest associated with these bonds are paid solely from the revenues and receipts collected in connection with the operation of the project. Most operating revenues earned by NCGA are collected from SMUD in connection with the sale of gas to SMUD. The ability for NCGA to service debt is dependent on various parties (particularly MSCG, as gas supplier) meeting their contractual obligations.

Callable Bonds. SMUD has $791.9 million of Electric Revenue Bonds that are currently callable, $450.0 million of which are fixed rate Build America Bonds debt and $341.9 million of subordinate bonds. SMUD also has $730.6 million of bonds that become callable from 2018 through 2026, and these bonds can be called until maturity.

Collateral. The principal and interest on SMUD's bonds are payable exclusively from, and are collateralized by a pledge of, the net revenues of SMUD's electric system. 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.

Covenants. SMUD's bond resolutions contain various covenants that include requirements to maintain minimum debt service coverage ratios, certain other financial ratios, stipulated minimum funding of revenue bond reserves, and various other requirements including a rate covenant to raise rates to maintain minimum debt service coverage.

SMUD has pledged future net electric revenues, component unit net project revenues, and net gas supply prepayment revenues to repay, in electric revenue, component unit project revenue, and gas supply prepayment revenue bonds issued from 1997 through 2016. Proceeds from the bonds provided financing for various capital improvement projects, component unit capital projects, and the prepayment of a twenty-year supply of natural gas. The bonds are payable solely from the net revenues generated by SMUD's electrical sales, component unit project revenues, and gas supply prepayment revenues and are payable through 2041 at December 31, 2016.

GASB Statement No. 48, ***"Sales and Pledges of Receivables and Future Revenues and Intra-Entity Transfers of Assets and Future Revenues"***, disclosures for pledged revenues are as follows:

	December 31,	
	2016	2015
	(thousands of dollars)	
Pledged future revenues	$ 2,531,960	$ 2,703,100
Principal and interest payments for the year ended	$ 269,141	$ 255,471
Total net revenues for the year ended	$ 786,764	$ 814,910
Total remaining principal and interest to be paid	$ 3,724,778	$ 3,992,623
Annual principal and interest payments as a percent of net revenues		
For the year ended	34%	31%

NOTE 11. COMMERCIAL PAPER NOTES

SMUD issues Commercial Paper Notes (Notes) to finance or reimburse capital expenditures. At December 31, 2016 and 2015 Notes outstanding totaled $200.0 million. The average interest rate for the Notes outstanding at December 31, 2016 was .75 percent and the average term was 68 days. SMUD has a $204.9 million letter of credit agreement, and there have not been any term advances under it.

The summarized activity of SMUD's Notes during 2016 and 2015 is presented below:

	Balance at Beginning of Year	Additions	Reductions	Balance at End of Year
		(thousands of dollars)		
December 31, 2016	$ 200,000	$ -0-	$ -0-	$ 200,000
December 31, 2015	$ 200,000	$ -0-	$ -0-	$ 200,000

NOTE 12. FAIR VALUE MEASUREMENT

Effective January 1, 2016, SMUD adopted GASB No. 72 as discussed in Note 3. GASB No. 72 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). SMUD utilizes market data or assumptions that market participants would use in pricing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique.

GASB No. 72 establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy defined by GASB No. 72 are as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2 inputs are inputs other than quoted prices included in Level 1 that are observable for an asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs that reflect SMUD's own assumptions about factors that market participants would use in pricing the asset or liability.

The valuation methods of the fair value measurements are disclosed below.

- LAIF – uses the fair value of the pool's share price multiplied by the number of shares held. This pool can include a variety of investments such as U.S. government securities, federal agency securities, negotiable certificates of deposit, bankers' acceptances, commercial paper, corporate bonds, bank notes, and other investments. The fair values of the securities are generally based on quoted market prices.
- Money Market Mutual Funds – uses a net asset value. Money market mutual funds may include several different underlying short term obligations, including corporates, U.S. Treasuries, U.S. Government Agency Obligations, and municipal securities. Certain investments within the fund may be deemed unobservable and not considered to be in an active market.
- U.S. Government Agency Obligations – uses a market based approach which considers yield, price of comparable securities, coupon rate, maturity, credit quality and dealer-provided prices.
- U.S. Treasury Obligations – uses a market approach based on institutional bond quotes. Evaluations are based on various market and industry inputs.
- Corporate Notes – uses a market based approach. Evaluations are based on various market and industry inputs.
- Municipal Bonds – uses a market approach based on institutional bond quotes. Evaluations are based on various market and industry inputs.
- Investment Derivative Instruments:
    - Interest rate swap agreements – uses the present value technique. The fair value of the interest rate swap agreements are calculated by discounting the expected cash flows at their corresponding zero coupon rate. The cash flows are estimated based on a 1-month LIBOR forward curve from Bloomberg, and assuming SIFMA is equal to 70 percent of 1-month LIBOR.
    - Gas related agreements – uses the market approach based on monthly quoted prices from an independent external pricing service. The fair values for natural gas and electricity derivative financial instruments are calculated based on prevailing market quotes in active markets (i.e., Henry Hub and So Cal) where identical contracts are available.

The following table identifies the level within the fair value hierarchy that SMUD's financial assets and liabilities were accounted for on a recurring basis as of December 31, 2016 and 2015, respectively. As required by GASB No. 72, financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. SMUD's assessment of the significance of a particular input to the fair value measurement requires judgment, and may affect the valuation of the fair value of liabilities and their placement within the fair value hierarchy levels.

Recurring Fair Value Measures

	At fair value as of December 31, 2016		
	Level 1	Level 2	Total
	(thousands of dollars)		
Investments, including cash and cash equivalents:			
LAIF	$ -0-	$ 130,689	$ 130,689
Money Market Mutual Funds	-0-	111,323	111,323
U.S. Government Agency Obligations	-0-	267,609	267,609
U.S. Treasury Obligations	58,759	-0-	58,759
Corporate Notes	-0-	150,105	150,105
Municipal Bonds	-0-	23,082	23,082
Total Investments, including cash and cash equivalents	$ 58,759	$ 682,808	$ 741,567
Investment Derivative Instrument Assets:			
Gas related agreements	$ 595	$ -0-	$ 595
Total Investment Derivative Instrument Assets	$ 595	$ -0-	$ 595
Investment Derivative Instrument Liabilities:			
Gas related agreements	$ 3,578	$ -0-	$ 3,578
Interest rate swap agreements	-0-	12,584	12,584
Total Investment Derivative Instrument Liabilities	$ 3,578	$ 12,584	$ 16,162

	At fair value as of December 31, 2015		
	Level 1	Level 2	Total
	(thousands of dollars)		
Investments, including cash and cash equivalents:			
LAIF	$ -0-	$ 119,223	$ 119,223
Money Market Mutual Funds	-0-	72,102	72,102
U.S. Government Agency Obligations	-0-	215,119	215,119
U.S. Treasury Obligations	23,142	-0-	23,142
Corporate Notes	-0-	176,439	176,439
Municipal Bonds	-0-	25,245	25,245
Total Investments, including cash and cash equivalents	$ 23,142	$ 608,128	$ 631,270
Investment Derivative Instrument Liabilities:			
Gas related agreements	$ 14,248	$ -0-	$ 14,248
Interest rate swap agreements	-0-	17,708	17,708
Total Investment Derivative Instrument Liabilities	$ 14,248	$ 17,708	$ 31,956

NOTE 13. RANCHO SECO DECOMMISSIONING LIABILITY

Background. The Rancho Seco decommissioning liability relates to the nuclear decommissioning of the former 913 MW nuclear power plant, which terminated commercial operations in 1989 and the separately licensed Independent Spent Fuel Storage Installation (ISFSI) facility. Nuclear decommissioning is the process of safely removing nuclear facilities from service and reducing residual radioactivity to a level that permits termination of the Nuclear Regulatory Commission (NRC) license, and release of the property for unrestricted use. The NRC has approved SMUD's decommissioning plan for the nuclear power plant, which delineates a phased process, and the first phase of physical work was completed in 2008. Decommissioning of the ISFSI will occur after the DOE removes the spent nuclear fuel and high level waste from the site.

In 2009, the NRC released all of the land formerly under the Part 50 license for unrestricted use with the exception of the 1 acre fenced area around the Interim Onsite Storage Building that was previously used to store low-level radioactive waste produced during the decommissioning of the nuclear reactor facility. This waste was disposed of in 2014. The decommissioning of that remaining facility began in 2015 and was completed in January 2017. With the submittal of the Final Status Survey Summary Report and accompanying License Amendment Request, the former operating license issued under Part 50 should be terminated in 2017.

The DOE, under the Nuclear Waste Policy Act of 1982, is responsible for permanent disposal of spent nuclear fuel and high-level radioactive waste which are currently in storage at the ISFSI. SMUD has a contract with the DOE for the removal and disposal of spent nuclear fuel and high-level (greater than class "C": GTCC) radioactive waste. All of SMUD's spent fuel and GTCC waste are currently stored in sealed canisters in the ISFSI. However, the date when fuel and GTCC waste removal will be complete is uncertain. In 2010, the DOE formally withdrew the application for licensing of Yucca Mountain as a high-level waste repository, essentially removing Yucca Mountain as an option for disposal of SMUD's used nuclear fuel. The DOE also announced in January 2010 the creation of a Blue Ribbon Commission to study alternatives for developing a repository for the nation's used nuclear fuel. The Commission provided a final report on alternatives in January 2012. The DOE evaluated the recommendations and published the report "Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste" in January 2013. The next phase of the process will be for Congress and the President of the United States to consider the recommendations and enact legislation to implement the recommendations. At this time, there is no credible information available to determine when the DOE would remove the used nuclear fuel from the Rancho Seco facility. The ISFSI will remain under the regulation of the NRC until the nuclear fuel and GTCC radioactive waste are removed and the site is decommissioned.

Asset Retirement Obligations (ARO). These financial statements reflect SMUD's current estimate of its obligation for the cost of decommissioning (including the cost of managing the Storage Facility until it can be decommissioned) under the requirements of FASB ASC 410, based on studies completed each year. Each year, SMUD evaluates the estimate of costs of decommissioning and there was an increase in costs in the 2016 study. The ARO estimate assumes all spent nuclear fuel will be removed from the site by 2035.

Rancho Seco's ARO is presented below:

	December 31,	
	2016	2015
	(thousands of dollars)	
Active decommissioning	$ 13,787	$ 15,696
Spent fuel management	134,183	134,676
Total ARO	$ 147,970	$ 150,372
Less: current portion	(6,439)	(8,822)
Total non-current portion of ARO	$ 141,531	$ 141,550

The summarized activity of the Rancho Seco ARO during 2016 and 2015 are presented below. The annual adjustments include a savings computed as the difference between the fair value of the obligation as if the decommissioning activities were performed by a third party and the amount actually incurred by SMUD performing the decommissioning activities.

	December 31, 2016	December 31, 2015
	(thousands of dollars)	
ARO at beginning of year	$ 150,372	$ 152,077
Accretion	7,429	7,510
Expenditures	(9,207)	(7,408)
Change in study	2,033	(1,108)
Annual adjustments	(2,657)	(699)
ARO at end of year	$ 147,970	$ 150,372

NOTE 14. PENSION PLANS

Summary of Significant Accounting Policies. For purposes of measuring net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the pension plan (Plan) and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the California Public Employees' Retirement System (PERS) Financial Office. For this purpose, benefit payments (including refunds of employee contributions) are recognized when currently due and payable in accordance with the benefit terms. Investments are reported at fair value.

GASB No. 68 requires that the reported results must pertain to liability and asset information within certain defined timeframes. The following timeframes are used for the year ended:

	December 31, 2016	December 31, 2015
Valuation date	June 30, 2015	June 30, 2014
Measurement date	June 30, 2016	June 30, 2015

Plan Description and Benefits Provided. 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 employee's years of credited service, age, and final compensation. A full description of the pension plan regarding number of employees covered, benefit provision, assumptions (for funding, but not accounting purposes), and membership information are included in the annual actuarial valuation reports as of June 30, 2015 and June 30, 2014. These reports and the PERS' audited financial statements are publicly available and can be obtained at the PERS' website at www.calpers.ca.gov.

Employees Covered by Benefit Terms. The following employees were covered by the benefit terms for the year ended:

	December 31, 2016	December 31, 2015
Inactive employees or beneficiaries currently receiving benefit payments	2,718	2,657
Inactive employees entitled to but not yet receiving benefit payments	944	940
Active employees	2,014	1,974
Total employees covered by benefit terms	5,676	5,571

Contributions. Section 20814(c) of the California Public Employees' Retirement Law requires that the employer contribution rates for all public employers be determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. The total plan contributions are determined through PERS' annual actuarial valuation process. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The employer is required to contribute the difference between the actuarially determined rate and the contribution rate of employees. For the PERS fiscal year ended June 30, 2016 and 2015, the average active employee contribution rate is 6.9 percent of annual pay for both years, and the employer's contribution rate is 14.1 percent and 12.0 percent of annual payroll, respectively. Employer contribution rates may change if plan contracts are amended. For the year ended December 31, 2016 and 2015, SMUD made contributions recognized by the pension plan in the amount of $27.6 million and $22.5 million, respectively.

Net Pension Liability. SMUD's NPL at December 31, 2016 and 2015 was measured at June 30, 2016 and 2015, respectively. The total pension liability used to calculate the NPL was determined by actuarial valuations as of June 30, 2015 and 2014 rolled forward using generally accepted actuarial procedures to the June 30, 2016 and 2015 measurement dates.

Actuarial Methods and Assumptions. The actuarial methods and assumptions used for the December 31, 2016 and December 31, 2015 total pension liabilities are as follows:

Actuarial Cost Method	Entry age normal
Discount Rate	7.65%
Inflation	2.75%
Salary Increases	Varies by entry age and service
Mortality Rate Table	The mortality table used was developed based on PERS' specific data. The table includes 20 years of mortality improvements using Society of Actuaries Scale BB.
Post Retirement Benefit Increase	Contract COLA up to 2.75% until Purchase Power Protection Allowance Floor on Purchasing Power applies, 2.75% thereafter

All other actuarial assumptions used for both years were based on the results of an actuarial experience study for the period from 1997 to 2011, including updates to salary increase, mortality and retirement rates.

Discount Rates. The discount rate used to measure the total pension liability for the years ended December 31, 2016 and 2015 was 7.65 percent. To determine whether the municipal bond rate should be used in the calculation of a discount rate for each plan, PERS stress tested plans that would most likely result in a discount rate that would be different from the actuarially assumed discount rate. The tests revealed the assets would not run out. Therefore, the 7.65 percent discount rate used for both valuations is appropriate and the use of the municipal bond rate calculation is not deemed necessary. The long-term expected discount rate of 7.65 percent is applied to all plans in the Public Employees Retirement Fund. The cash flows used in the testing were developed assuming that both members and employers will make their required contributions on time and as scheduled in all future years.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. Using historical returns of all the funds' asset classes, expected compound (geometric) returns were calculated over the short-term (first 10 years) and the long-term (11-60 years) using a building-block approach.

The table below reflects long-term expected real rate of return by asset class. The rate of return was calculated using the capital market assumptions applied to determine the discount rate and asset allocation. The target allocation shown below was adopted by the PERS' Board effective on July 1, 2015.

Asset Class	Current Target Allocation	Real Return Years 1-10	Real Return Years 11+
Global Equity	51.0%	5.25%	5.71%
Global Fixed Income	20.0%	.99%	2.43%
Inflation Sensitive	6.0%	.45%	3.36%
Private Equity	10.0%	6.83%	6.95%
Real Estate	10.0%	4.50%	5.13%
Infrastructure and Forestland	2.0%	4.50%	5.09%
Liquidity	1.0%	(.55%)	(1.05%)

Changes in the NPL:

The following table shows the changes in NPL recognized over the year ended December 31, 2016:

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
		(thousands of dollars)	
Balance at December 31, 2015	$ 1,971,468	$ 1,590,127	$ 381,341
Changes recognized for the measurement period:			
Service cost	29,044	-0-	29,044
Interest	147,497	-0-	147,497
Differences between expected and actual experience	(8,357)	-0-	(8,357)
Contributions – employer	-0-	27,645	(27,645)
Contributions – employee	-0-	15,271	(15,271)
Net investment income	-0-	8,316	(8,316)
Benefit payments	(99,155)	(99,155)	-0-
Administrative expense	-0-	(969)	969
Other	-0-	34	(34)
Net changes	69,029	(48,858)	117,887
Balances at December 31, 2016	$ 2,040,497	$ 1,541,269	$ 499,228

The following table shows the changes in NPL recognized over the year ended December 31, 2015:

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
		(thousands of dollars)	
Balance at December 31, 2014	$ 1,940,486	$ 1,613,784	$ 326,702
Changes recognized for the measurement period:			
Service cost	27,991	-0-	27,991
Interest	142,468	-0-	142,468
Differences between expected and actual experience	(10,613)	-0-	(10,613)
Changes of assumptions	(34,228)	-0-	(34,228)
Contributions – employer	-0-	22,499	(22,499)
Contributions – employee	-0-	14,503	(14,503)
Net investment income	-0-	35,797	(35,797)
Benefit payments	(94,636)	(94,636)	-0-
Administrative expense	-0-	(1,795)	1,795
Other	-0-	(25)	25
Net changes	30,982	(23,657)	54,639
Balances at December 31, 2015	$ 1,971,468	$ 1,590,127	$ 381,341

Sensitivity of the NPL to Changes in the Discount Rate. The following presents the NPL of the Plan as of the measurement date, calculated using the current discount rate, as well as what the net pension liability would be if it were calculated using a discount rate that is 1 percentage-point lower or 1 percentage-point higher than the current discount rate:

	1% Decrease (6.65%)	Current Discount Rate (7.65%)	1% Increase (8.65%)
		(thousands of dollars)	
Plan's NPL, December 31, 2016	$ 762,987	$ 499,228	$ 280,048
Plan's NPL, December 31, 2015	638,876	381,341	167,583

Pension Plan Fiduciary Net Position. Detailed information about the pension plan's fiduciary net position is available in the separately issued Plan financial statements and can be obtained at the PERS' website at www.calpers.ca.gov.

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions. For the year ended December 31, 2016 and 2015, SMUD recognized pension expense of $39.2 million and $13.3 million, respectively.

At December 31, 2016 and December 31, 2015, SMUD reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	December 31,			
	2016		2015	
	(thousands of dollars)			
Deferred outflows of resources:				
Differences between projected and actual earnings on pension plan investments	$	83,954	$	-0-
Employer's contributions to the Plan subsequent to the measurement of total pension liability		32,299		27,643
Total deferred outflows or resources	$	116,253	$	27,643
Deferred inflows of resources:				
Differences between expected and actual experience	$	(10,518)	$	(7,580)
Changes in assumptions		(14,669)		(24,448)
Differences between projected and actual earnings on pension plan investments		-0-		(15,551)
Total deferred inflows of resources	$	(25,187)	$	(47,579)

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended December 31:		
2017	$	28,413
2018		2,519
2019		37,971
2020		22,163
2021		-0-
Thereafter		-0-

Other Plans. SMUD provides its employees with two cash deferred compensation plans: one pursuant to Internal Revenue Code (IRC) Section 401(k) (401(k) Plan) and one pursuant to IRC Section 457 (457 Plan) (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 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 is responsible for ensuring compliance with IRC requirements concerning the Plans and has the fiduciary duty of reasonable care in the selection of investment alternatives, but neither SMUD, nor its Board or officers have any liability for market variations in the Plans' asset values. SMUD employees are responsible for determining how their funds are to be invested and pay all ongoing fees related to the Plans. The Plans are currently not subject to discrimination testing, nor the requirements of the Employee Retirement Income Security Act of 1974. SMUD employees participating in the Plans are allowed to contribute a portion of their gross income not to exceed the annual dollar limits prescribed by the IRC.

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 also matches non-represented employee contributions to the 401(k) Plan up to a set amount. SMUD made contributions into the 401(k) Plan of $3.9 million in 2016 and $3.5 million in 2015. SMUD does not match employee contributions, nor make contributions on behalf of its employees to the 457 Plan. Participating employees made contributions into both Plans totaling $19.7 million in 2016 and $18.5 million in 2015.

NOTE 15. OTHER POSTEMPLOYMENT BENEFITS

SMUD provides postemployment 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 postemployment 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. At June 30, 2016, 5,084 postemployment participants, including retirees, spouses of retirees, surviving spouses, and eligible dependents, were eligible to participate in SMUD's healthcare benefits program.

OPEB arises from an exchange of salaries and benefits for employee services rendered, and refers to postemployment benefits other than pension benefits such as postemployment healthcare benefits. SMUD considers the following benefits to be OPEB: Medical, Dental and Long-Term Disability.

Plan Description. SMUD is a member of the California Employers Retiree Benefit Trust (CERBT) for prefunding of OPEB obligations. The CERBT Fund is an IRC Section 115 Trust set up for the purpose of receiving employer contributions to prefund health and other postemployment benefits for retirees and their beneficiaries. The plan is an agent multiple employer plan administered by PERS, which provides medical, dental and long-term disability benefits for retirees and their beneficiaries. Any changes to these benefits would be approved by SMUD's Board and unions. To obtain a CERBT report, please contact PERS at 888-CALPERS.

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.

Funding Policy. SMUD has elected to net fund to PERS, so the contributions are the Annual Required Contribution (ARC) less the estimated cash flow for retiree benefit costs for each year. SMUD can elect to put in additional contributions into the trust, and in 2016 and 2015 funded an additional $17.9 million and $22.0 million to the CERBT, respectively. In 2016 and 2015, the net ARC contribution to the CERBT was $6.6 million for each year. During 2016 and 2015, SMUD made healthcare benefit contributions by paying actual medical costs of $20.7 million and $17.4 million, respectively.

Funding Status and Funding Progress. At June 30, 2016 and 2015, SMUD estimates that the actuarially determined accumulated postemployment benefit obligation was approximately $377.0 million and $319.4 million, respectively. At June 30, 2016 and 2015, the plan was 59.7 and 55.2 percent funded, respectively. The covered payroll (annual payroll of active employees covered by the plan) at June 30, 2016 and 2015, was $210.3 million and $191.4 million, respectively. The ratio of the unfunded actuarial accrued liability (UAAL) to covered payroll was 72.3 percent at June 30, 2016.

Annual OPEB Cost. The annual OPEB cost (expense) is calculated based on the ARC of the employer, an amount actuarially determined in accordance with the parameters of SGAS No. 45, "***Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions.***" The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed 30 years. For 2016, SMUD's annual OPEB Cost (expense) was $13.4 million.

The following table shows the components of SMUD's annual OPEB cost for the year, the amount actually paid in premiums, and changes in the net OPEB asset:

	Year Ended December 31,	
	2016	2015
	(thousands of dollars)	
Annual required contribution	$ 14,760	$ 28,815
Interest on net OPEB asset	(6,772)	(5,720)
Annual required contribution adjustment	5,455	4,595
Annual OPEB cost	13,443	27,690
Contributions made	(45,270)	(46,047)
Changes in net OPEB asset	(31,827)	(18,357)
Net OPEB asset, beginning of year	(96,080)	(77,723)
Net OPEB asset, end of year	$ (127,907)	$ (96,080)

SMUD's net OPEB asset is recorded as a component of Prepayments and other on the Consolidated Statements of Net Position.

SMUD's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB asset for 2016 and the two preceding years is as follows:

Year Ending	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Asset
	(thousands of dollars)		
December 31, 2016	$ 13,443	377%	$ (127,907)
December 31, 2015	27,690	166%	(96,080)
December 31, 2014	29,380	239%	(77,723)

Actuarial Methods and Assumptions. Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing the benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

The entry age normal was used in the June 30, 2016 and 2015 actuarial valuations. The actuarial assumptions used for the June 30, 2016 and 2015 valuations were 7.25 investment rate of return (net of administrative expenses) and a 3.0 percent inflation assumption for both years. The actuarial assumptions for an annual healthcare cost trend growth rate for 2016 and 2017 was based on actual premiums and ranged from 6.5 to 6.7 percent for 2018. Starting July 1, 2015, the UAAL is amortized as a level percentage of payroll over a closed 30-year period. At June 30, 2016 and 2015 the actuarial value of the assets was $225.0 and $176.2 million, respectively.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality and the healthcare cost trends. Amounts determined regarding the funded status of the plan and the ARC of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as RSI following the notes to the financial statements, presents multiyear trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

NOTE 16. INSURANCE PROGRAMS AND CLAIMS

SMUD is exposed to various risks of loss related to torts, theft of and destruction to assets, errors and omissions, and natural disasters. In addition, SMUD is exposed to risks of loss due to injuries to, and illnesses of, its employees. SMUD carries commercial insurance coverage to cover most claims in excess of specific dollar thresholds, which range from $5 thousand to $2.5 million per claim with total excess liability insurance coverage limits for most claims of $140.0 million. SMUD's property insurance coverage is based on the replacement value of the asset. There have been no significant reductions in insurance coverage, and in some cases, certain coverages increased. In 2016, 2015 and 2014, the insurance policies in effect have adequately covered all settlements of the claims against SMUD. No claims have exceeded the limits of property or liability insurance in any of the past three years.

The claims liability is included as a component of Self Insurance, Unearned Revenue and Other in the Consolidated Statements of Net Position.

SMUD's total claims liability, comprising claims received and claims incurred but not reported, at December 31, 2016, 2015 and 2014 is presented below:

	2016	2015	2014
		(thousands of dollars)	
Workers' compensation claims	$ 10,820	$ 10,983	$ 11,220
General and auto claims	2,227	698	825
Short and long-term disability claims	212	343	121
Claims liability	$ 13,259	$ 12,024	$ 12,166

Changes in SMUD's total claims liability during 2016, 2015, and 2014 are presented below:

	2016	2015	2014
		(thousands of dollars)	
Claims liability, beginning of year	$ 12,024	$ 12,166	$ 12,351
Add: provision for claims, current year	2,304	1,827	2,122
Increase in provision for claims in prior years	5,638	2,782	2,930
Less: payments on claims attributable to current and prior years	(6,707)	(4,751)	(5,237)
Claims liability, end of year	$ 13,259	$ 12,024	$ 12,166

NOTE 17. COMMITMENTS

Electric Power and Gas Supply Purchase Agreements. SMUD has numerous power purchase agreements with other power producers to purchase capacity, transmission, and associated energy to supply a portion of its load requirements. SMUD has minimum take-or-pay commitments for energy on some contracts. SMUD has numerous long-term natural gas supply, gas transportation and gas storage agreements with Canadian and U.S. companies to supply a portion of the consumption needs of SMUD's natural gas-fired power plants, which expire through 2040.

At December 31, 2016, the approximate minimum obligations for the “take-or-pay” contracts over the next five years are as follows:

	Electric		Gas
	(thousands of dollars)		
2017	$ 42,984		$ 14,212
2018	39,212		14,345
2019	38,819		14,632
2020	36,925		14,935
2021	29,399		15,248

At December 31, 2016, the approximate minimum obligations for the remaining contracts, assuming the energy or gas is delivered over the next five years, are as follows:

	Electric		Gas
	(thousands of dollars)		
2017	$ 120,921		$ 134,036
2018	152,429		111,366
2019	156,699		100,237
2020	164,115		97,854
2021	107,577		91,647

Contractual Commitments beyond 2021 – Electricity. Several of SMUD’s purchase power and transmission contracts extend beyond the five-year summary presented above. These contracts expire between 2022 and 2043 and provide for power under various terms and conditions. SMUD estimates its annual minimum commitments under the take or pay contracts ranges between $29.4 million in 2022 and $7.3 million in 2033. SMUD estimates its annual minimum commitments under the remaining contracts, assuming the energy is delivered, ranges between $107.5 million in 2022 and $0.2 million in 2043. SMUD’s largest purchase power source (in volume) is the Western Base Resource contract, whereby SMUD receives 25.4 percent of the amount of energy made available by Western, which represents an equal share of their revenue requirement. The Western contract expires on December 31, 2024.

Contractual Commitments beyond 2021 – Gas. Several of SMUD’s natural gas supply, gas transportation and gas storage contracts extend beyond the five-year summary presented above. These contracts expire between 2022 and 2040 and provide for transportation and storage under various terms and conditions. SMUD estimates its annual minimum commitments under the take or pay contracts ranges between $15.5 million in 2022 and $1.1 million in 2040. SMUD estimates its annual minimum commitments under the remaining contracts, assuming the gas is delivered, ranges between $93.4 million in 2020 and $13.9 million in 2040.

Solano Wind. In December 2011, SMUD entered into an agreement to sell the Solano Wind Phase 3 project (see Note 2). SMUD will buy all output from the plant under the terms of the Power Purchase Agreement. The plant began commercial operation in April 2012 and SMUD receives all output generated. Under the terms of the various agreements, SMUD has the option to buy the plant back upon the sixth, eighth, or fifteenth anniversary of the commercial operation date or the end of the delivery term.

Gas Price Swap Agreements. SMUD has entered into numerous variable to fixed rate swaps with notional amounts totaling 129,977,500 Dths for the purpose of fixing the rate on SMUD’s natural gas purchases for its gas-fueled power plants and gas indexed electric contracts. These gas price swap agreements result in SMUD paying fixed rates ranging from $2.75 to $7.17 per Dth. The swap agreements expire periodically from January 2017 through December 2022.

Gas Transport Capacity Agreements. SMUD has numerous long-term natural gas transport capacity agreements with Canadian and U.S. companies to transport natural gas to SMUD's natural gas-fired power plants from the supply basins in Alberta to the California-Oregon border and from supply basins in the southwest and Rocky Mountains to the Southern California border. These gas transport capacity agreements provide for the delivery of gas into SMUD-owned pipeline capacity within California. The gas transport capacity agreements provide SMUD with 56,700 Dth per day (Dth/d) of natural gas pipeline capacity from the North, including the Canadian Basins through 2023 and 51,300 Dth/d from the Southwest or Rocky Mountain Basins through at least 2019.

Gas Storage Agreements. SMUD also has an agreement for the storage of up to 2.0 million Dth of natural gas at regional facilities through March 2018.

Hydro License Agreements. SMUD has a hydro license for a term of 50 years effective July 1, 2014 (see Note 2). SMUD entered into four contracts with government agencies whereby SMUD makes annual payments to them for various services for the term of the license. Each contract is adjusted annually by an inflation index. The present value of the sum of the annual payments is $57.8 million at December 31, 2016.

Construction Contracts. In June 2016, the SMUD Board authorized a contract for the design and build of the South Fork Powerhouse and Boating Flow Release Facility located in El Dorado County, California. The contract price is a not-to-exceed amount of $14.2 million and the contract term ends December 31, 2018. The DOE has committed to fund approximately $1.5 million of the project through a grant award to SMUD (see Note 2).

NOTE 18. CLAIMS AND CONTINGENCIES

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 the development of NERC reliability standards. While these proceedings are complex and numerous, they generally fall into the following categories: (i) filings initiated by the California Independent System Operator Corporation (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 Investor Owned Utilities) to pass through costs to their existing wholesale transmission customers; (iii) filings initiated by FERC or market participants to establish market design and behavior rules or to complain about or investigate market behavior by certain market participants; (iv) filings initiated by transmission owners under their transmission owner tariffs for the purpose of establishing a regional transmission planning process; (v) filings initiated by providers of firm gas transportation service 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. SMUD's management 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.

Construction Matters. SMUD contracts with various firms to design and construct facilities for SMUD. Currently, SMUD is party to various claims, legal actions and complaints relating to such construction projects. SMUD's management 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.

Environmental Matters. 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 settlement agreements or consent orders will be reopened, the possibility exists. If any of the settlement agreements or consent orders is reopened, SMUD management does not believe that the outcome will have a material adverse impact on SMUD's financial position, liquidity or results of operations.

North City Remediation. In 1950, SMUD purchased property (North City Site) from the City of Sacramento and the Western Railroad Company. Portions of the North City Site prior to the sale had been operated as a municipal landfill by the City of Sacramento. SMUD currently operates a bulk substation on the North City Site. SMUD intends to assure compliance with State standards at closed landfill sites and is in the process of determining the appropriate remediation for the North City Site. In 2009, SMUD recorded a liability related to the investigation, design and remediation necessary for the North City Site in the amount of $12.0 million estimated for the entire project. As the owner of the North City Site, SMUD will have a role in the remediation selection and activities, as may those who operated or used the North City Site for landfill purposes. SMUD has estimated its exposure to such costs based on its proportionate share of the remedy. However, should others become unable to participate due to insolvency or are otherwise unable to pay their share of the costs, SMUD's share of remediation costs would increase. SMUD's management does not believe this will occur. Even if SMUD were to ultimately be responsible for all remediation costs associated with the North City Site, SMUD management believes that the outcome of these remediation costs will not have a material adverse impact on SMUD's financial position, liquidity or results of operations.

Station E. In April 2012, after conducting extensive drilling onsite to determine the presence of hazardous and solid waste onsite, SMUD entered into a purchase and sale agreement for property south and southwest of the North City Substation, to use for developing a new substation to replace North City. In August 2015, while conducting excavation onsite in preparation for construction, SMUD contractors encountered quantities of solid and hazardous waste onsite in excess of what initial drilling indicated. SMUD is currently working with the County of Sacramento in its capacity as the solid waste local enforcement agency for approval of a Partial Clean Closure and Post-closure Land Use Plan (Plan) to allow development of the site for use as a substation while removing and disposing of hazardous waste and installing a cap over areas where waste will remain. SMUD has recorded an estimated liability related to implementing the Plan in the amount of $16.1 million. SMUD is exploring recovery options from the parties that likely disposed of the hazardous waste onsite. Even if SMUD were to ultimately be responsible for all remediation costs associated with the Station E Site, SMUD management believes that the outcome of these remediation costs will not have a material adverse impact on SMUD's financial position, liquidity or results of operations.

Former Community Linen Rental Services (Community) Property. In 1981, SMUD purchased property from Community located at 1824 and 1826 61st Street (Site). That same year, Community sold its linen business and equipment to Mission Laundry (Mission). SMUD continued to lease portions of the property to Mission until 1985. SMUD settled with these businesses and waived a potential future legal claim for cleanup funding. The property to the north of the Site was owned by Kramer Carton Company (Kramer) and used for 60 years as a carton manufacturing facility. Based on environmental investigations, it has been determined there is contamination at the Kramer property, at the Site, and at areas south of the Kramer property. The contamination appears to emanate primarily from the Site, with some, albeit minor, contribution from the Kramer property. In 2016 SMUD purchased the Kramer Carton property from then-owner Willamette Capital Management, Ltd. (Willamette) at a price that reflected the estimated costs to clean both onsite soil contamination and the site's proportional contribution to groundwater contamination, and waived further contribution from Willamette. Preliminary environmental investigations of the Kramer property, the Site and areas south of the Kramer property indicate that total remediation costs will likely exceed $2.0 million. SMUD has recorded a liability for the estimated costs of the remediation. Although SMUD does not believe it is the source of the contamination, it appears that one or more of its predecessors in interest may be the cause of most of the contamination. Moreover, since Kramer is bankrupt, it is unclear whether it would be beneficial for SMUD to take legal action for contribution. Even if SMUD were to ultimately be responsible for all remediation costs associated with the Site, SMUD's management believes that the remediation of the Site will not have a material adverse impact on SMUD's financial position, liquidity or results of operations.

Buena Vista Biomass Power LLC. On October 2, 2015, SMUD informed Buena Vista Biomass Power, LLC (Buena Vista) of its intent to terminate its existing power purchase agreement (PPA) in accordance with the terms of the PPA, due to Buena Vista's failure to meet its contractual obligations. On December 4, Buena Vista informed SMUD that it disputed SMUD's right to terminate. On December 21, SMUD issued Buena Vista a termination notice, effective December 31, 2015. At the same time, the parties entered into a short term power purchase agreement effective January 1, 2016, while the parties attempted to negotiate a longer term arrangement on commercial terms acceptable to both parties. The short term agreement expired on February 29, 2016, and further negotiations with Buena Vista proved unsuccessful. Buena Vista filed an arbitration demand against SMUD on June 7, 2016. In the demand, Buena Vista claims damages against SMUD in the amount of $120.0 million on a theory of wrongful termination. SMUD is defending the action and expects to prevail due to the clear language in the PPA which allows for termination for failure to meet contractual energy production figures for multiple consecutive years. The arbitration hearing is set to commence on July 31, 2017 and the parties are currently engaging in the discovery process. However, SMUD management does not believe that the outcome will have a material adverse impact on SMUD's financial position, liquidity or results of operations.

Other Matters. Currently, SMUD is party to various claims, legal actions and complaints relating to its operations, including but not limited to: property damage and personal injury, contract disputes, torts, and employment matters. SMUD's management 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.

NOTE 19. SUBSEQUENT EVENT

In January and February 2017, SMUD experienced property damage from a series of winter storms. SMUD is currently assessing the amount of the damage and is pursuing claims under SMUD property insurance policies as well as with several Federal and State agencies.

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

Schedule of Changes in Net Pension Liability and Related Ratios During the Measurement Period

Pension. The schedule of changes in NPL and related ratios is presented below for the years for which SMUD has available data. SMUD will add to this schedule each year and when it reaches 10 years it will contain the last 10 years data which will then be updated each year going forward.

	December 31, 2016	December 31, 2015	December 31, 2014
	(thousands of dollars)		
Total pension liability:			
Service cost	$ 29,044	$ 27,991	$ 28,170
Interest	147,497	142,468	137,546
Differences between expected and actual experience	(8,357)	(10,613)	-0-
Changes of assumptions	-0-	(34,228)	-0-
Benefit payments, including refunds of employee contributions	(99,155)	(94,636)	(90,175)
Net change in total pension liability	69,029	30,982	75,541
Total pension liability, beginning of year	1,971,468	1,940,486	1,864,945
Total pension liability, end of year (a)	$ 2,040,497	$ 1,971,468	$ 1,940,486
Plan fiduciary net position:			
Contributions – employer	$ 27,645	$ 22,499	$ 21,511
Contributions – employee	15,271	14,503	15,346
Net investment income	8,316	35,797	245,659
Benefit payments, including refunds of employee contributions	(99,155)	(94,636)	(90,175)
Administrative expense	(969)	(1,795)	(2,028)
Other changes	34	(25)	-0-
Net change in plan fiduciary net position	(48,858)	(23,657)	190,313
Plan fiduciary net position, beginning of year	1,590,127	1,613,784	1,423,471
Plan fiduciary net position, end of year (b)	$ 1,541,269	$ 1,590,127	$ 1,613,784
Net pension liability, end of year (a)-(b)	$ 499,228	$ 381,341	$ 326,702
Plan fiduciary net position as a percentage of the total pension liability	75.5%	80.7%	83.2%
Covered payroll	$ 207,119	$ 197,481	$ 191,439
Net pension liability as a percentage of covered payroll	241.0%	193.1%	170.7%

Notes to Schedule

Benefit Changes: The figures above do not include any liability impact that may have resulted from plan changes which occurred after the June 30, 2015 valuation date. This applies for voluntary benefit changes as well as any offers of two years additional service credit.

Changes in Assumptions: There were no changes in assumptions.

Schedule of Plan Contributions

Pension. The schedule of pension contributions is presented below for the years for which SMUD has available data. SMUD will add to this schedule each year and when it reaches 10 years it will contain the last 10 years data which will then be updated each year going forward.

	December 31,		
	2016	2015	2014
		(thousands of dollars)	
Actuarially determined contribution	$ 27,645	$ 22,499	$ 21,511
Contributions in relation to the actuarially determined contribution	(27,645)	(22,499)	(21,511)
Contribution deficiency (excess)	$ -0-	$ -0-	$ -0-
Covered payroll	$ 222,133	$ 213,627	$ 195,394
Contributions as a percentage of covered payroll	12.5%	10.5%	11.0%

Notes to Schedule

The actuarial methods and assumptions used to set the actuarially determined contributions for the year ended December 31, 2016 was derived from the June 30, 2013 funding valuation report.

Actuarial cost method	Entry age normal
Amortization method/period	For details, see June 30, 2013 Funding Valuation Report
Asset valuation method	Market value of assets. For details, see June 30, 2013 Funding Valuation Report
Inflation	2.75%
Salary increases	Varies by entry age and service
Payroll growth	3.0%
Investment rate of return	7.5% Net of pension plan investment and administrative expenses; includes inflation
Retirement age	The probabilities of retirement are based on the 2010 PERS Experience Study for the period from 1997 to 2007
Mortality	The probabilities of mortality are based on the 2010 PERS Experience Study for the period from 1997 to 2007. Pre-retirement and post-retirement mortality rates include 5 years of projected mortality improvement using Scale AA published by the Society of Actuaries.

There were no changes in methods or assumptions used to determine the actuarially determined contributions for the years reported above.

Schedule of Funding Progress

OPEB. The schedule of funding progress for the other postemployment benefit healthcare plan is presented below for the three recent years for which SMUD has available data:

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
			(thousands of dollars)			
06/30/2016	$ 225,044	$ 377,045	$ 152,001	59.7%	$ 210,341	72.3%
06/30/2015	$ 176,239	$ 319,431	$ 143,192	55.2%	$ 191,414	74.8%
06/30/2014	$ 129,493	$ 505,142	$ 375,649	25.6%	$ 187,151	200.7%