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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, 2017 and 2016, 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, 2017 and 2016, 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.

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 16, 2018

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, 2017 and 2016. 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 1.5 million – most of Sacramento County and small adjoining portions of Placer and Yolo Counties. Its purpose is to enhance the quality of life for its customers and community through creative energy solutions. 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 July 2015, the Board approved a 2.5 percent rate increase for both 2016 and 2017 to allow for additional investments in technology and infrastructure and declared its intent to make time-of-day (TOD) rates the default rate for

residential customers in 2018. In July 2017, the Board approved a 1 percent rate increase in both 2018 and 2019 for commercial customers and a 1.5 percent rate increase in 2018 for residential customers and approved the TOD rate as the standard rate for residential customers in 2019. TOD rates better align with the cost of providing electricity, send more accurate price signals to customers, and give customers the opportunity to better manage their electricity bills by shifting usage to lower-cost time periods. Even with these increases, SMUD's rates continue to remain amongst the lowest in the state. In 2017, the average system rate was 32 percent below the average rate of the nearest investor owned utility.

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 the region's carbon footprint, and enhance the vitality of the 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 2017, SMUD focused on meeting customers' expectations for reliable, affordable and environmentally responsible energy, while adapting to a rapidly changing industry, technology advances and growing customer expectations. SMUD began implementing its 5-Year Strategic plan with an increased focus on operational excellence throughout the organization and embarked on exploring new business opportunities that open the door to new markets and revenue sources, such as providing Community Choice Aggregator services and launching the SMUD Energy Store. It experienced the strongest bond ratings in more than 30 years by having its credit ratings upgraded to AA by two of the three major rating agencies, making SMUD one of the highest credit rated publicly-owned utilities in California. In addition to exceeding the fixed debt service coverage goal, SMUD refinanced a portion of variable rate bonds with fixed rate bonds in order to reduce risk and provide additional options and savings opportunities in the future.

SMUD was recognized by its residential customers as the top California utility by J.D. Power and was ranked highest in both California and the West region for commercial customers. SMUD was also recognized nationally as the top-ranked electric utility for brand trust in the "2017 Utility Most Trusted Brands & Customer Engagement: Residential Customers" in the Cogent Reports study by Market Strategies International. SMUD celebrated 70 years of community service through its "70 Years Bright" campaign and launched the Shine community development awards program, awarding grants totaling \$400,000 to 23 organizations across the region. SMUD is on target to exceed the Board's 2020 carbon reduction goals bringing its energy portfolio to more than 50% carbon free. The Greenergy® program celebrated 20 years of bringing renewable power to customers, providing 750 GWh of renewable energy to over 74,000 customers. In addition it continued a 27-year partnership with the Sacramento Tree Foundation where almost 600,000 trees have been planted in the community – reducing carbon by nearly 600 million pounds. The Commercial SolarShares program exceeded its goals with the execution of nearly 100 MW of 20-year SolarShare contracts with some of SMUD's largest commercial customers, including both the State of California and the City of Sacramento. SMUD also played a major role in supporting the "Green City" designation for Sacramento which will result in the investment of \$44.0 million by Volkswagen over a 30 month period to support the expansion of electric vehicles. 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 700 jobs.

In July 2014, FERC issued a new fifty year license for the Upper American River Project (UARP) which 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. SMUD's other power generation facilities include a 3 MW of solar photovoltaic installations, a 102 MW Solano Wind Project, and five local gas-fired power plants with total

capacity of approximately 1,017 MW. In addition, SMUD has entered into 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. At December 31, 2017 and 2016, the liability for these contract payments was \$57.8 million.

In 2017, California's governor issued an order to officially end the then-current drought state of emergency for most parts of the state. SMUD's total reservoir storage in the UARP reached 111 percent of the historical average for the water year period ended October 1, 2017. Although reservoir levels in the UARP have increased since 2015, there remains the potential for wide swings in precipitation from year to year and dry conditions could return again in any year. 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 2017 and 2016, \$52.4 million and \$10.0 million were transferred into the HRSF, respectively, due to above average precipitation. The balance in the HRSF at December 31, 2017 and 2016 was \$62.4 million and \$10.0 million, respectively, and is an indicator of the significant impact of the rainfall and snowfall in 2017 and 2016.

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 2017 due to excess deliveries by WAPA, \$12.3 million was transferred to the RSF. In 2016, WAPA's deliveries fell short which resulted in a \$5.1 million transfer from the RSF. At December 31, 2017 and 2016, the balance of the RSF was \$37.5 million and \$25.2 million, respectively.

Decommissioning

SMUD has 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. Shipment of the previously stored Class B and Class C radioactive waste was completed in November 2014 to a low-level radioactive waste facility located in Andrews, Texas. The remaining Phase II decommissioning activities required for termination of the possession-only license commenced in 2015. In September 2017, SMUD formally requested the termination of the possession-only license and expects termination of the possession-only license to be completed in early 2018. The Accrued Decommissioning balance in the Consolidated Statements of Net Position includes \$149.8 million and \$148.0 million for costs related to Rancho Seco as of December 31, 2017 and 2016, 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. The DOE has yet to fulfill its contractual obligation to provide a permanent waste disposal site. SMUD has filed a series of successful lawsuits against the federal government for recovery of the past spent fuel costs, with recoveries to date in excess of \$104.0 million, including \$28.9 million received in 2017. SMUD will continue to pursue cost recovery claims until the DOE fulfills its obligation.

Employee Relations and Benefits

In 2017, SMUD was successful in negotiating a new four 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, effective January 2018.

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,*" and in 2017, SGAS No. 73, "*Accounting and Financial Reporting for Pensions and Related Assets that are not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*". The primary objective of these standards is to improve accounting and financial reporting by state and local governments for pensions. SMUD is required to report the Net Pension Liability (NPL), which is the difference between the actuarial present value of projected pension benefit payments attributable to employees' past service and the pension plan's fiduciary net position, in its Consolidated Statements of Net Position. At December 31, 2017 and 2016, the NPL was \$565.8 million and \$499.2 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 \$84.7 million and \$17.9 million contributions to the trust in 2017 and 2016, respectively. At June 30, 2017, the plan was 77.2 percent funded and the balance of the OPEB asset at December 31, 2017 and 2016 was \$229.2 million and \$127.9 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 include policies on cyber security, regulations related to regional transmission planning, the North American Electric Reliability Corporation reliability standards, anti-market manipulation rules, and greenhouse gas emissions (GHG). Legislation at the state level includes bills that provide for GHG standards and greater investment in energy efficient and environmentally friendly generation alternatives through more stringent renewable portfolio standards. Additionally, ongoing regulatory proceedings address water flow and quality issues related to Sacramento – San Joaquin River Delta.

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, debt issuance costs, and pension costs. As of December 31, 2017 and 2016, total regulatory assets were \$594.4 and \$598.4, 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, 2017 and 2016, total regulatory credits were \$445.7 million and \$370.2 million, respectively.

FINANCIAL POSITION

CONDENSED CONSOLIDATED STATEMENTS OF NET POSITION

	<u>2017</u>	<u>December 31,</u> <u>2016</u>	<u>2015</u>
		(millions of dollars)	
Assets			
Electric Utility Plant - net	\$ 3,354	\$ 3,345	\$ 3,324
Restricted and Designated Assets	121	57	47
Current Assets	1,200	1,084	1,021
Noncurrent Assets	<u>1,114</u>	<u>1,188</u>	<u>1,236</u>
Total Assets	\$ 5,789	\$ 5,674	\$ 5,628
Deferred Outflows of Resources	<u>280</u>	<u>279</u>	<u>263</u>
Total Assets and Deferred Outflows of Resources	<u>\$ 6,069</u>	<u>\$ 5,953</u>	<u>\$ 5,891</u>
Liabilities			
Long-Term Debt - net	\$ 2,342	\$ 2,504	\$ 2,674
Current Liabilities	607	630	650
Noncurrent Liabilities	<u>895</u>	<u>840</u>	<u>766</u>
Total Liabilities	\$ 3,844	\$ 3,974	\$ 4,090
Deferred Inflows of Resources	710	645	662
Net Position			
Net Investment in Capital Assets	980	816	658
Restricted	58	77	72
Unrestricted	<u>477</u>	<u>441</u>	<u>409</u>
Total Liabilities, Deferred Inflows of Resources, and Net Position	<u>\$ 6,069</u>	<u>\$ 5,953</u>	<u>\$ 5,891</u>

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES

Electric Utility Plant - net

2017 compared to 2016

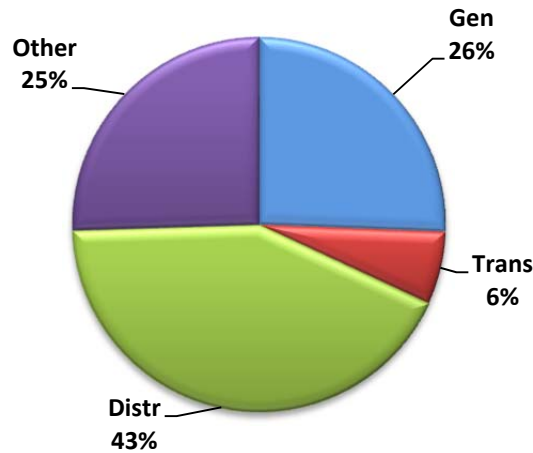
As of December 31, 2017, SMUD has invested approximately \$3,354.0 million in electric utility plant assets and construction work in progress (CWIP) net of accumulated depreciation. Electric Utility Plant - net makes up about 55 percent of SMUD's Total Assets and Deferred Outflows of Resources, which is similar to 2016. In 2017, SMUD capitalized approximately \$147.2 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 Joint Power Authorities (JPAs), investments in software and hardware and purchases related to the replacement of bulk substations. These additions were offset by the retirement of communication equipment, distribution assets, and software and hardware equipment.

2016 compared to 2015

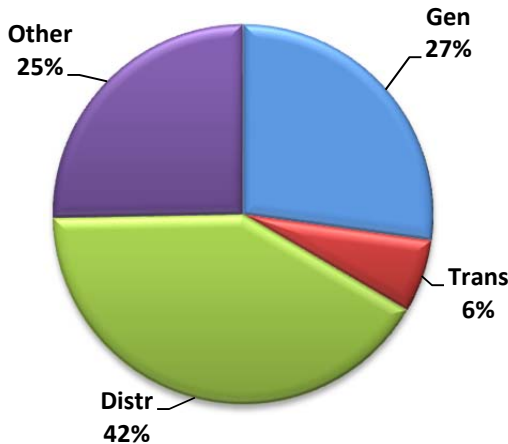
As of December 31, 2016, SMUD has invested approximately \$3,345.0 million in electric utility plant assets and construction work in progress (CWIP) net of accumulated depreciation. Electric Utility Plant - net makes up about 56 percent of SMUD's Total Assets and Deferred Outflows of Resources, which 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.

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

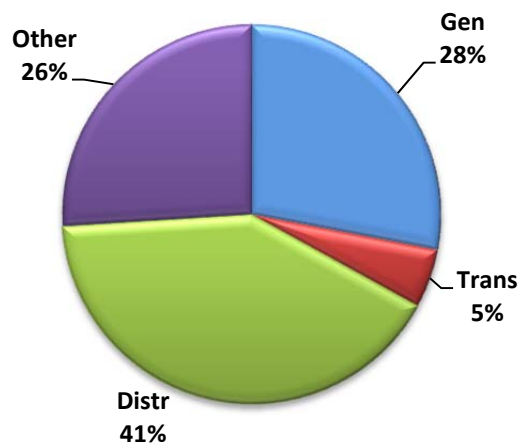
December 31, 2017



December 31, 2016



December 31, 2015



Restricted and Designated Assets

2017 compared to 2016

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 \$64.4 million during 2017. The increase was due to a net transfer of \$64.7 million to the RSF (including the HRSF) as a result of higher precipitation and higher energy deliveries from WAPA, and a decrease of \$22.0 million in current portion, offset by a decrease of \$22.2 million in the revenue bond and debt service reserves.

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.

Current Assets

2017 compared to 2016

Total current assets increased \$115.6 million in 2017. Prepayments and other increased by \$123.0 million. SMUD submitted its notice of intent to exercise the option to buy back the Solano Wind plant and recorded the prepayment for purchased power as current. Unrestricted cash and cash equivalents and regulatory costs to be recovered within one year increased \$27.0 million. These increases were offset by a total decrease of restricted and designated cash and cash equivalents and restricted and designated investments of \$35.1 million.

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 within one year. This increase was offset by total decreases of \$23.2 million in unrestricted cash and cash equivalents, regulatory costs to be recovered within one year, inventories, and prepayments and other, along with a decrease of \$20.5 million in credit support collateral deposits.

Noncurrent Assets

2017 compared to 2016

Total noncurrent assets decreased \$73.7 million. Prepaid power and capacity decreased by \$128.6 million partially due to the prepayment for purchased power for Solano being recorded as current (see Current Assets). In addition, prepaid gas and regulatory costs for future recovery decreased by \$47.3 million. These decreases were offset by an increase in prepayments and other of \$103.0 million primarily due to the increase in the OPEB asset as a result of additional contributions.

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.

Deferred Outflows of Resources

2017 compared to 2016

Total deferred outflows of resources for 2017 was comparable to 2016 due to a \$26.8 million increase in deferred pension outflows, offset by a total decrease of \$26.8 million in the value of hedging derivative instruments and amortization of bond losses.

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.

LIABILITIES AND DEFERRED INFLOWS OF RESOURCES

Long-Term Debt - net

2017 compared to 2016

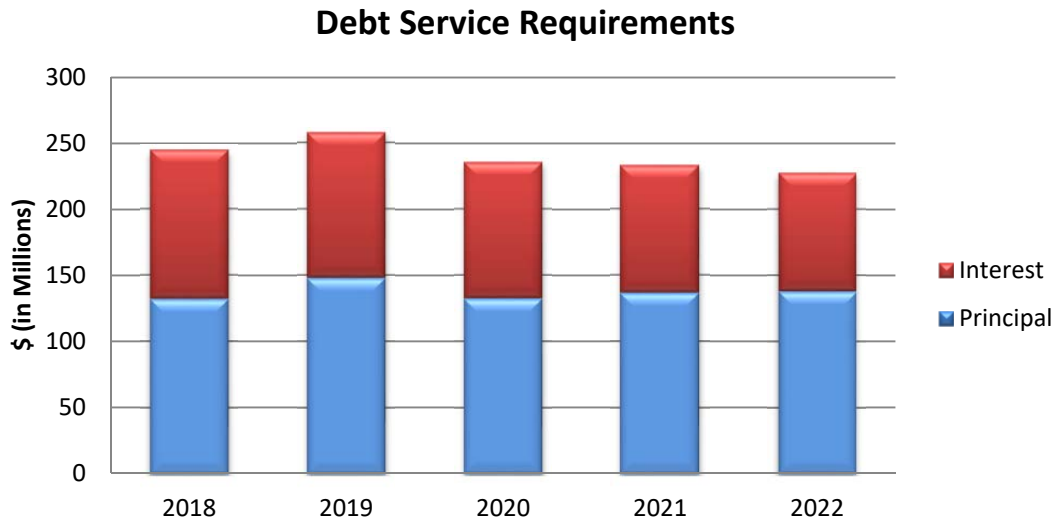
In December 2017, SMUD issued \$202.5 million of 2017 Series E Electric Revenue Refunding Bonds. The purpose of this transaction was to refund variable rate debt with fixed rate debt to reduce the risk of increased interest rates. Proceeds from the 2017 Series Bonds, in addition to \$13.0 million of funds on hand, were used to defease \$26.1 million of a portion of the Series 2016 N bonds, \$26.1 million of a portion of the Series 2016 O bonds, \$120.0 million of all of the outstanding 2016 Series P bonds, and \$77.9 million of all of the outstanding Series 2016 Q bonds. A total of \$250.1 million bonds were defeased through a legal defeasance, and accordingly, the liability for the defeased bonds has been removed from long-term debt - net in the Consolidated Statements of Net Position. The refunding resulted in the recognition of a deferred accounting loss of \$5.5 million, which is being amortized over the life of the refunding issue. Based on an assumed LIBOR rate of 1.7 percent for the life of the debt, the 2017 refunding increased future aggregate debt service payments by \$0.6 million and resulted in a total economic loss of \$1.4 million, which is the difference between the present value of the old and new debt service payments.

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 - net 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 - net, 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.

The following table shows SMUD’s future debt service requirements through 2022 as of December 31, 2017:



As of December 31, 2017, 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

2017 compared to 2016

Total current liabilities decreased \$22.4 million during 2017. The decrease was mainly due to decreases in long-term debt due within one year, interest payable and investment and hedging derivative instruments maturing within one year of \$35.2 million, offset by an increase in accounts payable of \$11.2 million.

2016 compared to 2015

Total current liabilities decreased \$19.8 million during 2016. The decrease was 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.

Noncurrent Liabilities

2017 compared to 2016

Total noncurrent liabilities increased \$54.0 million during 2017. The increase was mainly due to a \$66.6 million increase in the net pension liability, offset by a total decrease of \$16.5 million in investment and hedging derivative instruments.

2016 compared to 2015

Total 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.

Deferred Inflows of Resources

2017 compared to 2016

Total deferred inflows of resources increased \$65.1 million. Regulatory credits increased \$75.4 million due to a total of \$64.7 million transfer to the rate stabilization funds as a result of higher precipitation and higher energy deliveries from WAPA and a \$10.1 increase of SB-1. This increase was offset by a reduction of \$10.9 million for Solano Phase 3 wind facilities.

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.

RESULTS OF OPERATIONS

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

	<u>2017</u>	<u>December 31,</u> <u>2016</u>	<u>2015</u>
		(millions of dollars)	
Operating revenues	\$ 1,559	\$ 1,495	\$ 1,479
Operating expenses	<u>(1,339)</u>	<u>(1,240)</u>	<u>(1,271)</u>
Operating income	220	255	208
Other revenues	58	43	35
Interest charges	<u>(97)</u>	<u>(103)</u>	<u>(113)</u>
Change in net position	181	195	130
Net position - beginning of year	<u>1,334</u>	<u>1,139</u>	<u>1,009</u>
Net position - end of year	<u>\$ 1,515</u>	<u>\$ 1,334</u>	<u>\$ 1,139</u>

Operating Revenues

2017 compared to 2016

Total operating revenues increased \$64.5 million in 2017. An increase of \$69.3 million from retail sales includes the 2.5 percent rate increase that went into effect January 1, 2017. As of December 31, 2017, the number of customers increased to 628,952 at a slightly higher average revenue per kilowatt hour as compared to the end of 2016.

In 2017, SMUD transferred \$52.4 million to the HRSF and \$12.3 million to the RSF. In 2016, \$10.0 million was transferred to the HRSF, while \$5.1 million was transferred from the RSF.

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 2017, surplus gas sales were higher than 2016 by \$59.0 million due to higher gas prices and an increase in the volume of gas sold. Energy sales were lower in 2017 by \$2.6 million as compared to 2016 due to lower prices and lower energy sales.

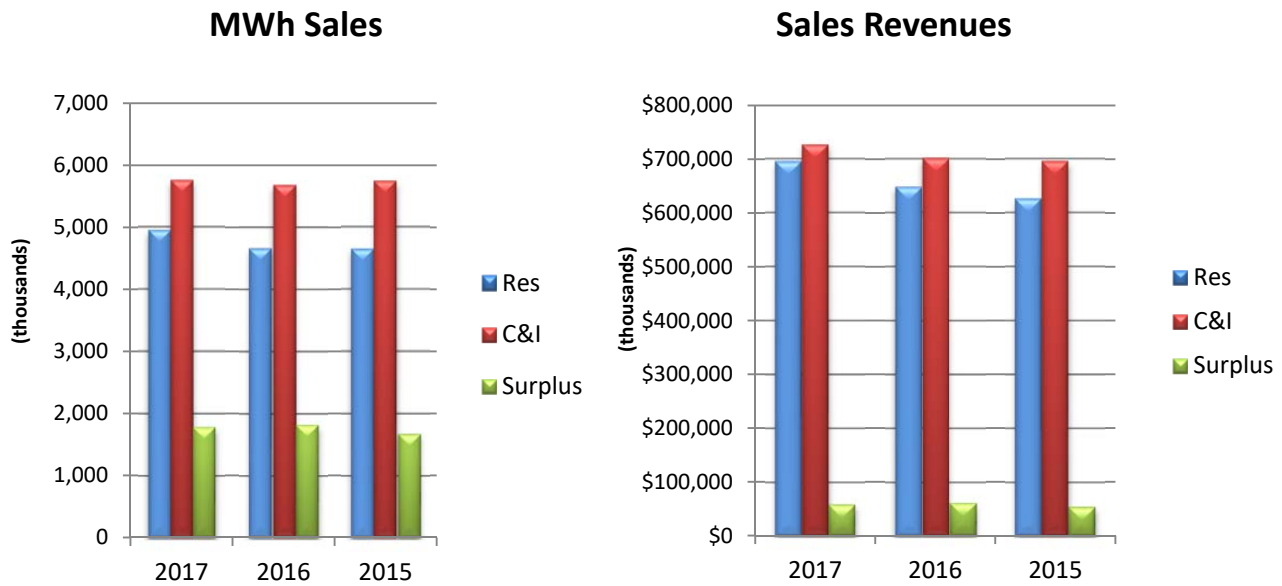
2016 compared to 2015

Total 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.

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

2017 compared to 2016

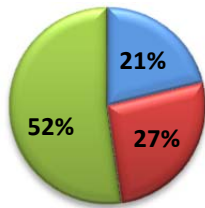
Total operating expenses increased \$99.5 million compared to 2016. Administrative, general and customer increased \$43.5 million. Operations which includes purchased power, production, transmission and distribution, and depletion, increased by \$35.3 million mainly due to higher purchased power volumes. Maintenance increased by \$15.8 million.

2016 compared to 2015

Total 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.

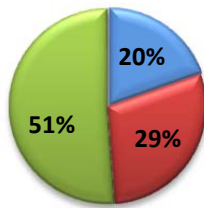
The following charts show the breakdown of operating expenses:

2017 Operating Expenses



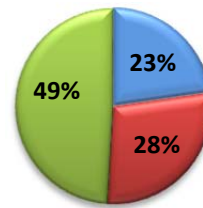
■ Purchased Power
■ Production
■ Other

2016 Operating Expenses



■ Purchased Power
■ Production
■ Other

2015 Operating Expenses



■ Purchased Power
■ Production
■ Other

Other Revenues

2017 compared to 2016

Total other revenues were \$15.5 million higher in 2017, which was partially attributable to the difference of \$9.2 million received for the judgment for Rancho Seco nuclear waste disposal litigation in 2017 and the PG&E refund received in 2016, and \$6.7 million of higher interest and lower ineffective gas and interest rate swaps.

2016 compared to 2015

Total 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.

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**SACRAMENTO MUNICIPAL UTILITY DISTRICT
CONSOLIDATED STATEMENTS OF NET POSITION**

	December 31,	
	2017	2016
	(thousands of dollars)	
ASSETS		
ELECTRIC UTILITY PLANT		
Plant in service	\$ 5,914,377	\$ 5,781,353
Less accumulated depreciation and depletion	(2,841,294)	(2,652,574)
Plant in service - net	3,073,083	3,128,779
Construction work in progress	280,692	216,081
Total electric utility plant - net	3,353,775	3,344,860
RESTRICTED AND DESIGNATED ASSETS		
Revenue bond and debt service reserves	93,322	115,465
Nuclear decommissioning trust fund	8,411	8,357
Rate stabilization fund	99,899	35,154
Other funds	10,235	10,487
Less current portion	(90,757)	(112,722)
Total restricted and designated assets	121,110	56,741
CURRENT ASSETS		
Unrestricted cash and cash equivalents	227,657	209,282
Unrestricted investments	424,759	442,752
Restricted and designated cash and cash equivalents	38,262	43,104
Restricted and designated investments	52,495	69,618
Receivables - net:		
Retail customers	162,192	163,629
Wholesale and other	37,346	31,100
Regulatory costs to be recovered within one year	20,178	11,523
Investment derivative instruments maturing within one year	1	420
Hedging derivative instruments maturing within one year	2,868	7,881
Inventories	58,135	55,644
Prepaid gas to be delivered within one year	34,587	30,909
Prepayments and other	141,759	18,785
Total current assets	1,200,239	1,084,647
NONCURRENT ASSETS		
Regulatory costs for future recovery	574,197	586,895
Prepaid gas	222,348	256,935
Prepaid power and capacity	1,211	129,847
Investment derivative instruments	-0-	175
Hedging derivative instruments	18,359	20,389
Energy efficiency loans - net	21,817	23,586
Credit support collateral deposits	1,500	1,500
Due from affiliated entity	22,406	18,975
Prepayments and other	252,483	149,702
Total noncurrent assets	1,114,321	1,188,004
TOTAL ASSETS	5,789,445	5,674,252
DEFERRED OUTFLOWS OF RESOURCES		
Accumulated decrease in fair value of hedging derivatives	105,645	124,895
Deferred pension outflows	143,034	116,253
Unamortized bond losses	30,584	38,053
TOTAL DEFERRED OUTFLOWS OF RESOURCES	279,263	279,201
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	\$ 6,068,708	\$ 5,953,453

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

**SACRAMENTO MUNICIPAL UTILITY DISTRICT
CONSOLIDATED STATEMENTS OF NET POSITION**

	December 31,	
	2017	2016
	(thousands of dollars)	
LIABILITIES		
LONG-TERM DEBT - net	\$ 2,341,775	\$ 2,504,650
CURRENT LIABILITIES		
Commercial paper notes	200,000	200,000
Accounts payable	83,991	72,796
Purchased power payable	19,968	18,552
Credit support collateral obligation	3,364	3,937
Long-term debt due within one year	132,440	160,585
Accrued decommissioning	5,775	6,439
Interest payable	33,147	35,754
Accrued salaries and compensated absences	38,551	36,926
Investment derivative instruments maturing within one year	2,833	6,521
Hedging derivative instruments maturing within one year	27,500	28,234
Customer deposits and other	59,710	59,907
Total current liabilities	607,279	629,651
NONCURRENT LIABILITIES		
Net pension liability	565,800	499,228
Accrued decommissioning	156,431	153,121
Investment derivative instruments	11,697	9,641
Hedging derivative instruments	78,145	96,661
Self insurance and other liabilities	82,543	81,952
Total noncurrent liabilities	894,616	840,603
TOTAL LIABILITIES	3,843,670	3,974,904
DEFERRED INFLOWS OF RESOURCES		
Accumulated increase in fair value of hedging derivatives	21,227	28,270
Regulatory credits	445,657	370,212
Deferred pension inflows	32,921	25,187
Financing obligation and other	209,956	220,957
TOTAL DEFERRED INFLOWS OF RESOURCES	709,761	644,626
NET POSITION		
Net investment in capital assets	979,724	816,295
Restricted:		
Revenue bond and debt service	51,833	70,197
Other funds	7,031	6,710
Unrestricted	476,689	440,721
TOTAL NET POSITION	1,515,277	1,333,923
COMMITMENTS, CLAIMS AND CONTINGENCIES (Notes 17 and 18)		
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION	\$ 6,068,708	\$ 5,953,453

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,	
	2017	2016
	(thousands of dollars)	
OPERATING REVENUES		
Residential	\$ 689,806	\$ 645,430
Commercial and industrial	727,574	702,690
Street lighting and other	44,189	40,687
Wholesale	144,538	88,090
Senate Bill - 1 revenue deferral	(10,124)	(5,142)
AB-32 revenue	28,097	37,981
Public good deferral	-0-	(10,000)
Rate stabilization fund transfers	(64,744)	(4,903)
Total operating revenues	1,559,336	1,494,833
OPERATING EXPENSES		
Operations:		
Purchased power	283,693	243,031
Production	346,523	355,360
Transmission and distribution	78,922	71,312
Administrative, general and customer	235,147	191,658
Public good	59,081	65,210
Maintenance	120,759	104,913
Depreciation	194,925	184,043
Depletion	8,001	12,103
Regulatory amounts collected in rates	12,253	12,127
Total operating expenses	1,339,304	1,239,757
OPERATING INCOME	220,032	255,076
NON-OPERATING REVENUES AND EXPENSES		
Other revenues and (expenses):		
Interest income	11,848	8,646
Investment expense	(9,589)	(13,134)
Other income - net	56,314	47,565
Total other revenues and (expenses)	58,573	43,077
Interest charges:		
Interest on debt	100,485	105,141
Allowance for funds used during construction	(3,234)	(2,246)
Total interest charges	97,251	102,895
CHANGE IN NET POSITION	181,354	195,258
NET POSITION - BEGINNING OF YEAR	1,333,923	1,138,665
NET POSITION - END OF YEAR	\$ 1,515,277	\$ 1,333,923

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,	
	2017	2016
	(thousands of dollars)	
CASH FLOWS FROM OPERATING ACTIVITIES		
Receipts from customers	\$ 1,458,707	\$ 1,387,897
Receipts from surplus power sales	60,592	61,370
Receipts from surplus gas sales	83,571	24,976
Receipts from steam sales	5,109	3,998
Other receipts	60,081	58,950
Payments/receipts for credit support collateral	(573)	43,568
Issuance/repayment of energy efficiency loans - net	2,659	5,824
Payments to employees - payroll and other	(287,607)	(279,360)
Payments for wholesale power	(284,960)	(249,919)
Payments for gas purchases	(194,675)	(194,279)
Payments to vendors/others	(372,033)	(300,456)
Payments for decommissioning	(7,055)	(9,111)
Net cash provided by operating activities	523,816	553,458
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
Repayment of debt	(28,395)	(25,925)
Receipts from federal and state grants	9,832	9,600
Interest on debt	(12,143)	(13,221)
Net cash used in noncapital financing activities	(30,706)	(29,546)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Construction expenditures	(217,042)	(197,465)
Contributions in aid of construction	13,183	14,491
Net proceeds from bond issues	237,082	-0-
Repayments and refundings of debt	(382,290)	(126,855)
Interest on debt	(100,821)	(103,860)
Net cash used in capital and related financing activities	(449,888)	(413,689)
CASH FLOWS FROM INVESTING ACTIVITIES		
Sales and maturities of securities	316,145	227,820
Purchases of securities	(347,049)	(332,209)
Interest and dividends received	11,204	7,864
Investment revenue/expenses - net	(9,607)	(13,509)
Net cash used in investing activities	(29,307)	(110,034)
Net increase in cash and cash equivalents	13,915	189
Cash and cash equivalents at the beginning of the year	262,772	262,583
Cash and cash equivalents at the end of the year	\$ 276,687	\$ 262,772
Cash and cash equivalents included in:		
Unrestricted cash and cash equivalents	\$ 227,657	\$ 209,282
Restricted and designated cash and cash equivalents	38,262	43,104
Restricted and designated assets (a component of the total of \$121,110 and \$56,741 at December 31, 2017 and 2016, respectively)	10,768	10,386
Cash and cash equivalents at the end of the year	\$ 276,687	\$ 262,772

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,	
	2017	2016
	(thousands of dollars)	
Operating income	\$ 220,032	\$ 255,076
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	194,925	184,043
Depletion	8,001	12,103
Regulatory amortization	12,253	12,127
Amortization of advance capacity and other	(1,427)	(1,427)
Amortization of prepaid gas supply	30,909	27,768
Revenue recognized from regulatory credits - net	74,868	20,045
Other receipts/payments - net	31,346	17,532
Changes in operating assets, deferred outflows, liabilities and deferred inflows:		
Receivables - retail customers, wholesale and other	6,099	4,929
Inventories, prepayments and other	(103,348)	(24,319)
Credit support collateral deposits	-0-	44,020
Deferred pension outflows	(26,781)	(88,610)
Payables and accruals	10,261	4,239
Credit support collateral obligation	(573)	(452)
Decommissioning	(7,055)	(9,111)
Net pension liability	66,572	117,887
Deferred pension inflows	7,734	(22,392)
Net cash provided by operating activities	\$ 523,816	\$ 553,458

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

	Year Ended December 31,	
	2017	2016
	(thousands of dollars)	
Amortization of debt related (expenses) and premiums - net	\$ 9,813	\$ 9,135
Unrealized holding loss	(2,033)	(543)
Change in valuation of derivative financial instruments	13,245	89,925
Amortization of revenue for assets contributed in aid of construction	19,437	18,988
Allowance for funds used during construction	3,234	2,246
Construction expenditures included in accounts payable	22,199	20,141
Bond proceeds deposited into an escrow account for purposes of refunding long-term debt	-0-	186,324

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

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.

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 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 (U.S.) 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 2017 and 2016 were 3.5 and 3.3 percent, respectively. Depreciation is calculated using the following estimated lives:

Generation	5 to 80 years
Transmission and Distribution	15 to 50 years
Gas Pipeline	15 to 90 years
General	3 to 90 years

Investment in Joint Powers Authority (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 are included as restricted assets. Board actions limiting the use of such funds are included as designated assets. When SMUD restricts or designates funds for a specific purpose, and restricted and designated and unrestricted resources are available for use, it is SMUD’s policy to use restricted and designated 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.

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. 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 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, 2017 and 2016, SMUD’s Accrued Decommissioning balance in the Consolidated Statements of Net Position relating to Rancho Seco was \$149.8 million and \$148.0 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 \$12.4 million and \$11.6 million as of December 31, 2017 and 2016, 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 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 12). 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, 2017 and 2016, unbilled revenues were \$72.6 million and \$72.2 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, 2017 and 2016, respectively, SMUD held \$3.4 million and \$3.9 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, 2017 and 2016, SMUD posted cash collateral of \$1.5 million 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 2017 and 2016 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, 2017	\$ 831	\$ 1,326	\$ (633)	\$ 1,524
December 31, 2016	\$ 1,771	\$ 663	\$ (1,603)	\$ 831
Retail Customers:				
December 31, 2017	\$ 2,397	\$ 6,760	\$ (5,985)	\$ 3,172
December 31, 2016	\$ 3,116	\$ 3,920	\$ (4,639)	\$ 2,397
Energy Efficiency Loans:				
December 31, 2017	\$ 804	\$ (675)	\$ 548	\$ 677
December 31, 2016	\$ 1,041	\$ (953)	\$ 716	\$ 804

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, 2017 and 2016, the total estimated liability for vacation and other compensated absences was \$26.0 million and \$24.9 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 2017 and 2016 was 2.4 percent and 2.3 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 natural 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 (see Note 17). 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 is amortized as Purchased Power expense on the Consolidated Statements of Revenues, Expenses and Changes in Net Position over the life of the agreement. In April 2012, under the terms of the Construction Management Agreement, SMUD, on behalf of the purchaser, completed construction of the plant, which was accounted for as a financing agreement, and the revenue recognition from the transaction, would occur over the life of the contracts. 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. 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.

SMUD has the option to buy the plant back. In October 2017, SMUD submitted its notice of intent to exercise this option which will occur in April 2018. As a result of SMUD's intent to purchase Solano, the prepayment for purchased power at December 31, 2017 is recorded as Prepayments and Other under Current Assets.

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 as Prepayments and Other under Current Assets 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, for the Former Community Linen Rental Services Property, and for its Headquarters building that is being renovated. In 2017 and 2016, SMUD identified and recorded pollution remediation obligations for land sites, including one where it will be building a substation (see Note 18). At December 31, 2017 and 2016, the total pollution remediation liability was \$33.6 million and \$35.3 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. Effective July 1, 2014, SMUD received a new 50-year hydro license. 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, 2017 and 2016, the liability for these contract payments was \$57.8 million 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) was an effort by the State of California to set a greenhouse gas (GHG) emissions reduction goal into law, and initially was set through 2020. In 2015, the state established a 2030 goal for GHG emissions at 40% below 1990 levels, and in July of 2017 AB-398 was approved by the Governor. Central to these initiatives is the Cap and Trade program, which covers major sources of GHG emissions in the State including power plants; AB-398 extended Cap and Trade through 2030. The Cap and Trade program includes an enforceable emissions cap that will decline over time. The State distributes allowances, which are tradable permits, equal to the emissions allowed under the cap. Sources under the cap are required 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 2016 and 2017. 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 continues to monitor new legislation and proposed programs that could impact AB-32 and its subsequent extensions.

Net Pension Liability (NPL). SMUD implemented SGAS No. 73, “*Accounting and Financial Reporting for Pensions and Related Assets that are not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68,*” (GASB No. 73) in 2017 (see Note 3) and SGAS No. 68, “*Accounting and Financial Reporting for Pensions – An Amendment of GASB Statement No. 27,*” (GASB No. 68) in 2015. The NPL is the difference between the actuarial present value of projected pension benefit payments attributable to employees’ past service and the pension plan’s fiduciary net position. At December 31, 2017 and 2016, the NPL was \$565.8 million and \$499.2 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 acquisition value. 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 natural disasters, such as storm or fire 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 2017, SMUD recorded \$4.9 million of grant proceeds and recognized \$3.0 million as a component of Other Income - Net, in the Consolidated Statements of Revenues, Expenses and Changes in Net Position, and \$1.9 million as a Regulatory Credit. 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 (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 2017 and 2016 due to budget sequestration by the federal government. SMUD recognized \$9.1 million in revenues in 2017 and also in 2016 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 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. The 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. In June 2015, SMUD filed a suit against DOE which covered the costs incurred from 2010 through June 2015. In June 2017, SMUD received an award for \$28.9 million from the U.S. Court of Claims of which 27.1 million was recorded as Other Income - Net in the Consolidated Statements of Revenues, Expenses and Changes in Net Position and \$1.7 million was recorded as CIAC since a portion of the award constituted a reimbursement for the cost of capital assets.

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 16, 2018, which is the date that the financial statements were available to be issued.

Reclassifications. Certain amounts in the 2016 Consolidated Financial Statements have been reclassified in order to conform to the 2017 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 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).

In January 2017, GASB issued SGAS No. 84, "*Fiduciary Activities*" (GASB No. 84). This statement establishes standards of accounting and financial reporting for fiduciary activities. GASB No. 84 establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. An activity meeting the criteria should be reported in a fiduciary fund in the basic financial statements. Governments with activities meeting the criteria should present a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position reports the assets, deferred outflows of resources, liabilities, deferred inflows of resources, and fiduciary net position of the fiduciary activities. The statement of changes in fiduciary net position reports the additions to and deductions from the fiduciary fund(s). This statement also provides for the recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. This statement is effective for SMUD in 2019. SMUD is currently assessing the financial statement impact of adopting this statement.

In March 2017, GASB issued SGAS No. 85, "*Omnibus 2017*" (GASB No. 85). GASB No. 85 addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits). This statement is effective for SMUD in 2018. SMUD is currently assessing the financial statement impact of adopting this statement but does not expect it to be material.

In May 2017, GASB issued SGAS No. 86, "*Certain Debt Extinguishment Issues*" (GASB No. 86). The primary objective of this statement is to improve consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources (resources other than the proceeds of refunding debt) are placed in an irrevocable trust for the sole purpose of extinguishing debt. GASB No. 86 also improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance. This statement is effective for SMUD in 2018. SMUD is currently assessing the financial statement impact of adopting this statement.

In June 2017, GASB issued SGAS No. 87, "*Leases*" (GASB No. 87). The objective of this statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. GASB No. 87 requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use

an underlying asset. Under GASB No. 87, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The lease liability should be measured at the present value of payments expected to be made during the lease term. As payments are made the lease liability is reduced and an outflow of resources (interest expense) is recognized for the interest on the liability. The lease asset should be amortized in a systematic and rational manner over the shorter of the lease term or the useful life of the underlying asset. The lease receivable should be measured at the present value of the lease payments expected to be received during the lease term. Any payments received are first allocated to accrued interest receivable and then to lease receivable. The deferred inflow of resources should be recognized as inflows of resources (revenue) in a systematic and rational manner over the term of the lease. The lessor should not derecognize the asset underlying the lease. A lease is defined as a contract that conveys control of the right to use another entity's nonfinancial asset (the underlying asset) as specified in the contract for a period of time in an exchange or exchange-like transaction. Examples of nonfinancial assets include buildings, land, vehicles, and equipment. Any contract that meets this definition should be accounted for under the leases guidance, unless specifically excluded in this statement. The lease term is defined as the period during which a lessee has a noncancellable right to use an underlying asset, plus the following periods, if applicable. A short-term lease is defined as a lease that, at the commencement of the lease term, has a maximum possible term under the lease contract of 12 months (or less), including any options to extend, regardless of their probability of being exercised. Lessees and lessors should recognize short-term lease payments as outflows of resources (expenses) or inflows of resources (revenues), respectively, based on the payment provisions of the lease contract. This statement is effective for SMUD in 2020. SMUD is currently assessing the financial statement impact of adopting this statement.

NOTE 3. ACCOUNTING CHANGE

In June 2015, GASB issued GASB No. 73, which extends the approach to accounting and financial reporting established in GASB No. 68 to all pensions. It also requires that information similar to that required by GASB No. 68 be included in the notes to consolidated financial statements and required supplementary information.

SMUD implemented GASB No. 73 in 2017 for a supplemental benefit in lieu of California Public Employees' Retirement System (PERS) Single Highest Year. The implementation impacted the Consolidated Statements of Net Position when the net pension liability and corresponding deferred outflows and deferred inflows of resources were recorded. The implementation also impacted the Consolidated Statements of Revenues, Expenses and Changes in Net Position as pension expense was also recorded (see Note 14 and the Required Supplementary Information).

NOTE 4. UTILITY PLANT

The summarized activity of SMUD's Utility Plant during 2017 is presented below:

	Balance January 1, <u>2017</u>	<u>Additions</u>	Transfers and <u>Disposals</u>	Balance December 31, <u>2017</u>
	(thousands of dollars)			
Nondepreciable Utility Plant:				
Land and land rights	\$ 135,340	\$ 2,822	\$ (15)	\$ 138,147
CWIP	<u>216,081</u>	<u>209,506</u>	<u>(144,895)</u>	<u>280,692</u>
Total nondepreciable utility plant	<u>351,421</u>	<u>212,328</u>	<u>(144,910)</u>	<u>418,839</u>
Depreciable Utility Plant:				
Generation	1,669,687	28,730	(3,200)	1,695,217
Transmission	305,426	3,505	1,264	310,195
Distribution	2,179,486	75,318	(8,650)	2,246,154
Investment in gas properties	206,621	-0-	(4)	206,617
Investment in JPAs	15,649	-0-	(439)	15,210
Intangibles	388,049	25,913	(717)	413,245
General	<u>881,095</u>	<u>13,759</u>	<u>(5,262)</u>	<u>889,592</u>
	5,646,013	147,225	(17,008)	5,776,230
Less: accumulated depreciation and depletion	(2,646,547)	(204,603)	16,196	(2,834,954)
Less: accumulated amortization on JPAs	<u>(6,027)</u>	<u>(313)</u>	<u>-0-</u>	<u>(6,340)</u>
	(2,652,574)	(204,916)	16,196	(2,841,294)
Total depreciable plant	<u>2,993,439</u>	<u>(57,691)</u>	<u>(812)</u>	<u>2,934,936</u>
Total Utility Plant - net	<u>\$ 3,344,860</u>	<u>\$ 154,637</u>	<u>\$ (145,722)</u>	<u>\$ 3,353,775</u>

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

	Balance January 1, 2016	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	<u>176,071</u>	<u>217,050</u>	<u>(177,040)</u>	<u>216,081</u>
Total nondepreciable utility plant	<u>306,123</u>	<u>222,374</u>	<u>(177,076)</u>	<u>351,421</u>
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	<u>860,992</u>	<u>40,183</u>	<u>(20,080)</u>	<u>881,095</u>
	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	<u>(5,714)</u>	<u>(313)</u>	<u>-0-</u>	<u>(6,027)</u>
	(2,489,820)	(196,157)	33,403	(2,652,574)
Total depreciable plant	<u>3,017,777</u>	<u>(23,016)</u>	<u>(1,322)</u>	<u>2,993,439</u>
Total Utility Plant - net	<u>\$ 3,323,900</u>	<u>\$ 199,358</u>	<u>\$ (178,398)</u>	<u>\$ 3,344,860</u>

NOTE 5. INVESTMENT IN JOINT POWERS AUTHORITY

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 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.

Effective July 1, 2014, SMUD entered into a 25-year long-term layoff agreement with TANC and certain members that 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 \$208.4 million (unaudited) at December 31, 2017, 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. SMUD recorded transmission expenses related to TANC of \$14.6 million and \$15.7 million in 2017 and 2016, respectively.

Summary financial information for TANC is presented below:

	<u>December 31,</u>	
	2017 <u>(Unaudited)</u>	2016 <u>(Unaudited)</u>
	(thousands of dollars)	
Total Assets	\$ 341,672	\$ 338,213
Total Deferred Outflows of Resources	<u>2,922</u>	<u>4,139</u>
Total Assets and Deferred Outflows of Resources	<u>\$ 344,594</u>	<u>\$ 342,352</u>
Total Liabilities	\$ 330,927	\$ 328,767
Total Net Position	<u>13,667</u>	<u>13,585</u>
Total Liabilities and Net Position	<u>\$ 344,594</u>	<u>\$ 342,352</u>
Changes in Net Position for the Six Months Ended December 31	<u>\$ (424)</u>	<u>\$ (374)</u>

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

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 Area (BAA) operations was transferred from SMUD to BANC. BANC performs FERC approved BAA reliability functions that are managed by North American Electric Reliability Corporation (NERC), nationally, and by Western Electricity Coordinating Council functions in the west. SMUD recorded expenses related to BANC of \$1.6 million in 2017 and \$2.0 million in 2016.

Summary financial information for BANC is presented below:

	<u>December 31,</u>	
	2017 <u>(Audited)</u>	2016 <u>(Audited)</u>
	(thousands of dollars)	
Total Assets	<u>\$ 2,092</u>	<u>\$ 1,594</u>
Total Liabilities	\$ 2,092	\$ 1,594
Total Net Position	<u>-0-</u>	<u>-0-</u>
Total Liabilities and Net Position	<u>\$ 2,092</u>	<u>\$ 1,594</u>
Changes in Net Position for the Year Ended December 31	<u>\$ -0-</u>	<u>\$ -0-</u>

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

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 42 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.

The summarized activity of SMUD's component units for 2017 is presented below:

CONDENSED STATEMENTS OF NET POSITION
December 31, 2017
(thousands of dollars)

	<u>CVFA</u>	<u>SCA</u>	<u>SFA</u>	<u>SPA</u>	<u>NCGA</u>
Assets					
Electric Utility Plant - net	\$ 50,685	\$ 72,074	\$ 219,260	\$ 65,055	\$ -0-
Current Assets	18,468	35,485	51,238	19,295	59,786
Noncurrent Assets	<u>54</u>	<u>101</u>	<u>1,209</u>	<u>2</u>	<u>223,372</u>
Total Assets	69,207	107,660	271,707	84,352	283,158
Deferred Outflows of Resources	<u>289</u>	<u>495</u>	<u>3,031</u>	<u>-0-</u>	<u>-0-</u>
Total Assets and Deferred Outflows of Resources	<u>\$ 69,496</u>	<u>\$ 108,155</u>	<u>\$ 274,738</u>	<u>\$ 84,352</u>	<u>\$ 283,158</u>
Liabilities					
Long-Term Debt - net	\$ 10,790	\$ 19,518	\$ 152,830	\$ -0-	\$ 233,170
Current Liabilities	11,459	14,983	42,418	8,040	37,328
Noncurrent Liabilities	<u>10,428</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
Total Liabilities	32,677	34,501	195,248	8,040	270,498
Net Position	<u>36,819</u>	<u>73,654</u>	<u>79,490</u>	<u>76,312</u>	<u>12,660</u>
Total Liabilities and Net Position	<u>\$ 69,496</u>	<u>\$ 108,155</u>	<u>\$ 274,738</u>	<u>\$ 84,352</u>	<u>\$ 283,158</u>

CONDENSED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
December 31, 2017
(thousands of dollars)

	<u>CVFA</u>	<u>SCA</u>	<u>SFA</u>	<u>SPA</u>	<u>NCGA</u>
Operating Revenues	\$ 32,007	\$ 51,777	\$ 163,942	\$ 31,959	\$ 41,895
Operating Expenses	<u>27,207</u>	<u>45,471</u>	<u>151,250</u>	<u>37,809</u>	<u>31,083</u>
Operating Income	4,800	6,306	12,692	(5,850)	10,812
Non-Operating Revenues and Expenses					
Other Revenues	50	146	140	44	785
Interest Charges and Other	<u>(924)</u>	<u>(1365)</u>	<u>(4,538)</u>	<u>-0-</u>	<u>(11,870)</u>
Change in Net Position Before Distributions and Contributions	3,926	5,087	8,294	(5,806)	(273)
Distribution to Member	-0-	-0-	-0-	-0-	(809)
Member Contributions and Adjustments	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>69</u>
Change in Net Position	3,926	5,087	8,294	(5,806)	(1,013)
Net Position – Beginning of Year	<u>32,893</u>	<u>68,567</u>	<u>71,196</u>	<u>82,118</u>	<u>13,673</u>
Net Position – End of Year	<u>\$ 36,819</u>	<u>\$ 73,654</u>	<u>\$ 79,490</u>	<u>\$ 76,312</u>	<u>\$ 12,660</u>

CONDENSED STATEMENTS OF CASH FLOWS
December 31, 2017
(thousands of dollars)

	<u>CVFA</u>	<u>SCA</u>	<u>SFA</u>	<u>SPA</u>	<u>NCGA</u>
Net Cash Provided by Operating Activities	\$ 12,357	\$ 11,998	\$ 35,590	\$ 1,722	\$ 41,174
Net Cash Provided by (Used in) Noncapital Financing Activities	-0-	-0-	-0-	-0-	(41,347)
Net Cash Used in Capital Financing Activities	(10,539)	(7,956)	(33,607)	(353)	-0-
Net Cash Provided by Investing Activities	<u>37</u>	<u>111</u>	<u>122</u>	<u>33</u>	<u>758</u>
Net Increase in Cash and Cash Equivalents	1,855	4,153	2,105	1,402	585
Cash and Cash Equivalents at the Beginning of the Year	<u>6,910</u>	<u>16,197</u>	<u>22,704</u>	<u>5,795</u>	<u>20,654</u>
Cash and Cash Equivalents at the End of the Year	<u>\$ 8,765</u>	<u>\$ 20,350</u>	<u>\$ 24,809</u>	<u>\$ 7,197</u>	<u>\$ 21,239</u>

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

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

	<u>CVFA</u>	<u>SCA</u>	<u>SFA</u>	<u>SPA</u>	<u>NCGA</u>
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	<u>88</u>	<u>139</u>	<u>1,308</u>	<u>3</u>	<u>258,079</u>
Total Assets	71,342	107,798	299,759	90,374	313,427
Deferred Outflows of Resources	<u>505</u>	<u>758</u>	<u>3,528</u>	<u>-0-</u>	<u>-0-</u>
Total Assets and Deferred Outflows of Resources	<u>\$ 71,847</u>	<u>\$ 108,556</u>	<u>\$ 303,287</u>	<u>\$ 90,374</u>	<u>\$ 313,427</u>
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	<u>9,726</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
Total Liabilities	38,954	39,989	232,091	8,256	299,754
Net Position	<u>32,893</u>	<u>68,567</u>	<u>71,196</u>	<u>82,118</u>	<u>13,673</u>
Total Liabilities and Net Position	<u>\$ 71,847</u>	<u>\$ 108,556</u>	<u>\$ 303,287</u>	<u>\$ 90,374</u>	<u>\$ 313,427</u>

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

	<u>CVFA</u>	<u>SCA</u>	<u>SFA</u>	<u>SPA</u>	<u>NCGA</u>
Operating Revenues	\$ 35,854	\$ 56,602	\$ 210,631	\$ 44,719	\$ 40,338
Operating Expenses	<u>33,295</u>	<u>51,541</u>	<u>196,941</u>	<u>49,179</u>	<u>27,943</u>
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	<u>(1,169)</u>	<u>(1,618)</u>	<u>(4,670)</u>	<u>-0-</u>	<u>(12,973)</u>
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	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>71</u>
Change in Net Position	2,997	6,442	19,041	(1,082)	(548)
Net Position – Beginning of Year	<u>29,896</u>	<u>62,125</u>	<u>52,155</u>	<u>83,200</u>	<u>14,221</u>
Net Position – End of Year	<u>\$ 32,893</u>	<u>\$ 68,567</u>	<u>\$ 71,196</u>	<u>\$ 82,118</u>	<u>\$ 13,673</u>

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

	<u>CVFA</u>	<u>SCA</u>	<u>SFA</u>	<u>SPA</u>	<u>NCGA</u>
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	<u>5</u>	<u>28</u>	<u>33</u>	<u>5</u>	<u>693</u>
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	<u>6,372</u>	<u>12,240</u>	<u>21,698</u>	<u>4,157</u>	<u>20,085</u>
Cash and Cash Equivalents at the End of the Year	<u>\$ 6,910</u>	<u>\$ 16,197</u>	<u>\$ 22,704</u>	<u>\$ 5,795</u>	<u>\$ 20,654</u>

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 www.smud.org.

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 and reverse repurchase agreements; medium term corporate notes; LAIF; and money market funds. 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 short-term investments 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, 2017 and 2016, \$18.3 million and \$11.3 million in deposits were uninsured, respectively. The bank balance is also, per a depository pledge agreement between SMUD and SMUD’s bank, collateralized at 134 percent and 122 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, 2017 and 2016, respectively. SMUD had money market funds of \$117.7 million and \$111.3 million which were uninsured at December 31, 2017 and 2016, respectively. SMUD’s investments and money market 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:

Investment Type:	December 31,	
	2017	2016
Federal Home Loan Banks	20%	19%
Freddie Mac	13%	34%
Federal Farm Credit Bank	13%	2%
Corporate Note – Berkshire Hathaway	5%	3%
Corporate Note – Wells Fargo Bank	5%	6%

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. SMUD is exposed to interest rate risk on its interest rate swaps (see Note 9).

The following schedules indicate the credit and interest rate risk at December 31, 2017 and 2016. The credit ratings listed are from Standard & Poor's (S&P) or Moody's. (N/A is defined as not applicable to the rating disclosure requirements.)

At December 31, 2017, SMUD's cash, cash equivalents, and investments consist of the following:

<u>Description</u>	<u>Credit Rating</u>	Remaining Maturities (in years)			<u>Total Fair Value</u>
		<u>Less Than 1</u>	<u>1-5</u>	<u>More than 5</u>	
(thousands of dollars)					
Cash and Cash Equivalents:					
Cash	N/A	\$ 16,738	\$ -0-	\$ -0-	\$ 16,738
LAIF	Not Rated	119,832	-0-	-0-	119,832
Money Market Funds	AAA	117,727	-0-	-0-	117,727
Deposit at Notice	N/A	4,545	-0-	-0-	4,545
Commercial Paper	A-1	<u>17,845</u>	<u>-0-</u>	<u>-0-</u>	<u>17,845</u>
Total cash and cash equivalents		276,687	-0-	-0-	276,687
Investments:					
Fannie Mae	AA+	-0-	19,497	-0-	19,497
Federal Farm Credit Bank	AA+	-0-	68,266	-0-	68,266
Federal Home Loan Bank	AA+	-0-	103,430	-0-	103,430
Freddie Mac	AA+/A-1+	9,890	59,608	-0-	69,498
Financing Corp FICO	N/A	-0-	12,777	-0-	12,777
U.S. Treasury Obligations	AA+	-0-	163,120	-0-	163,120
Corporate Notes	AAA/AA/AA-/A+/A	-0-	106,170	-0-	106,170
Municipal Bonds	AA-	-0-	15,073	-0-	15,073
Commercial Paper	A-1+/A-1	<u>29,765</u>	<u>-0-</u>	<u>-0-</u>	<u>29,765</u>
Total investments		<u>39,655</u>	<u>547,941</u>	<u>-0-</u>	<u>587,596</u>
Total cash, cash equivalents, and investments		<u>\$ 316,342</u>	<u>\$ 547,941</u>	<u>\$ -0-</u>	<u>\$ 864,283</u>

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

Description	Credit Rating	Remaining Maturities (in years)			Total Fair Value
		Less Than 1	1-5	More than 5	
(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 Funds	AAAm	111,323	-0-	-0-	111,323
Deposit at Notice	N/A	2,446	-0-	-0-	2,446
Commercial Paper	A-1	<u>16,700</u>	<u>-0-</u>	<u>-0-</u>	<u>16,700</u>
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-	<u>10,408</u>	<u>-0-</u>	<u>-0-</u>	<u>10,408</u>
Total investments		<u>299,342</u>	<u>259,383</u>	<u>-0-</u>	<u>558,725</u>
Total cash, cash equivalents, and investments		<u>\$ 562,114</u>	<u>\$ 259,383</u>	<u>\$ -0-</u>	<u>\$ 821,497</u>

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

	December 31,	
	2017	2016
(thousands of dollars)		
Total Cash, Cash Equivalents, and Investments:		
Revenue bond reserve and debt service funds:		
Revenue bond reserve fund	\$ 6,432	\$ 7,395
Debt service fund	51,841	68,964
Component unit bond reserve and debt service funds	<u>35,049</u>	<u>39,106</u>
Total revenue bond reserve and debt service funds	93,322	115,465
Nuclear decommissioning trust fund	8,411	8,357
Rate stabilization fund	99,899	35,154
Component unit other restricted funds	3,207	3,777
Escrow fund	6,374	6,056
Other restricted funds	654	654
Unrestricted funds	<u>652,416</u>	<u>652,034</u>
Total cash, cash equivalents, and investments	<u>\$ 864,283</u>	<u>\$ 821,497</u>

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 deferred inflow of resources, 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 deferred inflow of resource is utilized (see Note 9).

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 is 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:

	<u>December 31,</u>	
	<u>2017</u>	<u>2016</u>
	(thousands of dollars)	
Regulatory Costs:		
Decommissioning	\$ 151,640	\$ 149,258
Derivative financial instruments	14,529	15,567
Debt issuance costs	2,526	7,913
Pension	<u>425,680</u>	<u>425,680</u>
Total regulatory costs	594,375	598,418
Less: regulatory costs to be recovered within one year	<u>(20,178)</u>	<u>(11,523)</u>
Total regulatory costs for future recovery - net	<u>\$ 574,197</u>	<u>\$ 586,895</u>

Regulatory Credits

CIAC. In 2017 and 2016, SMUD added CIAC totaling \$14.6 million and \$15.6 million, respectively, to Regulatory Credits in the Consolidated Statements of Net Position and recorded \$11.9 million and \$11.4 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 2017, \$12.3 million was transferred from revenue to the RSF as a result of higher than budgeted energy deliveries from Western Area Power Administration (Western). In 2016, \$5.1 million was transferred from the RSF to revenue as a result of lower than budgeted energy deliveries from 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 2017 and 2016, \$52.4 million and \$10.0 million, respectively, 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 2018-2020.

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. SMUD has spent less than it collected in SB-1 revenues and has recorded a regulatory credit. Collection of the solar surcharge ended in December 2017 when total collections reached \$130.0 million.

Grant Revenues. In 2009, SMUD was awarded several large grants under the ARRA, which provided significant 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,	
	2017	2016
	(thousands of dollars)	
Regulatory Credits:		
CIAC	\$ 254,328	\$ 251,623
Rate stabilization	37,509	25,188
Hydro rate stabilization	62,390	9,966
EAPR	10,000	10,000
Senate Bill 1	12,049	1,925
Grant revenues	46,975	52,535
TANC operations costs	<u>22,406</u>	<u>18,975</u>
Total regulatory credits	<u>\$ 445,657</u>	<u>\$ 370,212</u>

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 2017 and 2016, 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, 2017 (amounts in thousands; gains shown as positive amounts, losses as negative):

	2017 Changes in Fair Value		Fair Value at December 31, 2017		Notional
	Current Amount	Noncurrent Amount	Current Amount	Noncurrent Amount	
<u>Cash Flow Hedges:</u>					
(thousands of dollars)					
(thousands of Dekatherms (Dth))					
<u>Asset: Investment Derivative Instruments</u>					
Gas – Commodity	\$ (401)	\$ (175)	\$ -0-	\$ -0-	
Gas – Storage	1	-0-	1	-0-	78 Dth
Gas – Transportation	(19)	-0-	-0-	-0-	
Total Investment					
Derivative Instruments	\$ (419)	\$ (175)	\$ 1	\$ 0	
<u>Asset: Hedging Derivative Instruments</u>					
Gas – Basis	\$ 265	\$ -0-	\$ 265	\$ -0-	3,960 Dth
Gas – Commodity	(307)	(394)	526	228	9,258 Dth
Gas – Storage	(341)	-0-	2	-0-	78 Dth
Gas – Transportation	5	-0-	52	-0-	2,290 Dth
Interest Rate	(4,635)	(1,636)	2,023	18,131	\$317,785
Total Hedging					
Derivative Instruments	\$ (5,013)	\$ (2,030)	\$ 2,868	\$ 18,359	
<u>Liability: Investment Derivative Instruments</u>					
Gas – Basis	\$ (34)	\$ -0-	\$ -0-	\$ -0-	
Gas – Commodity	(623)	2,645	1,636	3,900	7,833 Dth
Gas – Transportation	(30)	-0-	-0-	-0-	
Interest Rate	(3,001)	(589)	1,197	7,797	\$122,115
Total Investment					
Derivative Instruments	\$ (3,688)	\$ 2,056	\$ 2,833	\$ 11,697	
<u>Liability: Hedging Derivative Instruments</u>					
Gas – Basis	\$ (515)	\$ -0-	\$ -0-	\$ -0-	
Gas – Commodity	(168)	(18,516)	27,219	78,145	91,660 Dth
Gas – Storage	11	-0-	202	-0-	2,590 Dth
Gas – Transportation	(62)	-0-	79	-0-	4,563 Dth
Total Hedging					
Derivative Instruments	\$ (734)	\$ (18,516)	\$ 27,500	\$ 78,145	

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		Notional
	Current Amount	Noncurrent Amount	Current Amount	Noncurrent Amount	
<u>Cash Flow Hedges:</u>					
(thousands of dollars)					
(thousands of Dekatherms (Dth))					
<u>Asset: Investment Derivative Instruments</u>					
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	
<u>Asset: Hedging Derivative Instruments</u>					
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	
<u>Liability: Investment Derivative Instruments</u>					
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	
<u>Liability: Hedging Derivative Instruments</u>					
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	

Objectives and Terms of Hedging Derivative Instruments. The objectives and terms of SMUD’s hedging derivative instruments that were outstanding at December 31, 2017 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.

	<u>Notional Amount Dth</u>	<u>Beginning Date</u>	<u>Ending Date</u>	<u>Minimum Price/Dth</u>	<u>Maximum Price/Dth</u>
Gas – Basis	3,960	01/01/18	12/31/18	\$ (1.56)	\$ (1.42)
Gas – Commodity	100,918	01/01/08	12/31/22	2.61	7.17
Gas – Storage	2,668	01/01/18	03/31/18	(.26)	.25
Gas – Transportation	6,853	01/01/18	12/31/18	(.42)	(.20)

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.

	<u>Notional Amount Dth</u>	<u>Beginning Date</u>	<u>Ending Date</u>	<u>Minimum Price/Dth</u>	<u>Maximum Price/Dth</u>
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

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.

The 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: Wholesale and 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: Wholesale and 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, 2017.

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, 2017 is shown in the table below. The credit ratings listed are from S&P or Moody's.

<u>Counterparty Gas Contracts:</u>	<u>Counterparty Credit Rating</u>
Bank of Montreal	A+
Barclays Bank PLC	A-
Cargill Inc.	A
Citigroup Inc.	BBB+
EDF Trading Group	BBB
J.P. Morgan Ventures Energy Corp.	A-
Merrill Lynch	BBB+
Morgan Stanley Capital Group, Inc.	BBB+
Shell Trading Market Risk	A
 <u>Interest Rate Contracts:</u>	
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:

	<u>December 31,</u>	
	<u>2017</u>	<u>2016</u>
	(thousands of dollars)	
Electric revenue bonds, 2.0%-6.32%, 2018-2041	\$ 1,783,660	\$ 1,676,315
Subordinated electric revenue bonds, index rates, 2018-2041	<u>88,750</u>	<u>341,850</u>
Total electric revenue bonds	1,872,410	2,018,165
Component unit project revenue bonds, 3.0%-5.25%, 2018-2030	186,890	220,925
Gas supply prepayment bonds, index rates, 2018-2027	<u>264,475</u>	<u>292,870</u>
Total long-term debt outstanding	2,323,775	2,531,960
Bond premiums - net	<u>150,440</u>	<u>133,275</u>
Total long-term debt	2,474,215	2,665,235
Less: amounts due within one year	<u>(132,440)</u>	<u>(160,585)</u>
Total long-term debt - net	<u>\$ 2,341,775</u>	<u>\$ 2,504,650</u>

The summarized activity of SMUD's long-term debt during 2017 is presented below:

	December 31, <u>2016</u>	<u>Additions</u>	Payments or <u>Amortization</u>	December 31, <u>2017</u>	Amounts Due Within <u>One Year</u>
	(thousands of dollars)				
Electric revenue bonds	\$ 1,676,315	\$ 202,500	\$ (95,155)	\$ 1,783,660	\$ 76,300
Subordinate electric revenue bonds	341,850	-0-	(253,100)	88,750	-0-
Component unit project revenue bonds	220,925	-0-	(34,035)	186,890	24,835
Gas supply prepayment bonds	<u>292,870</u>	<u>-0-</u>	<u>(28,395)</u>	<u>264,475</u>	<u>31,305</u>
Total	2,531,960	202,500	(410,685)	2,323,775	<u>\$ 132,440</u>
Unamortized premiums - net	<u>133,275</u>	<u>34,582</u>	<u>(17,417)</u>	<u>150,440</u>	
Total long-term debt	<u>\$ 2,665,235</u>	<u>\$ 237,082</u>	<u>\$ (428,102)</u>	<u>\$ 2,474,215</u>	

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

	December 31, <u>2015</u>	<u>Additions</u>	Payments or <u>Amortization</u>	December 31, <u>2016</u>	Amounts Due Within <u>One Year</u>
	(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	<u>318,795</u>	<u>-0-</u>	<u>(25,925)</u>	<u>292,870</u>	<u>28,395</u>
Total	2,703,100	491,740	(662,880)	2,531,960	<u>\$ 160,585</u>
Unamortized premiums - net	<u>123,080</u>	<u>36,437</u>	<u>(26,242)</u>	<u>133,275</u>	
Total long-term debt	<u>\$ 2,826,180</u>	<u>\$ 528,177</u>	<u>\$ (689,122)</u>	<u>\$ 2,665,235</u>	

At December 31, 2017 scheduled annual principal maturities and interest are as follows:

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
	(thousands of dollars)		
2018	\$ 132,440	\$ 112,762	\$ 245,202
2019	148,270	110,003	258,273
2020	132,810	103,089	235,899
2021	136,955	96,426	233,381
2022	138,170	89,790	227,960
2023 – 2027 (combined)	725,910	346,275	1,072,185
2028 – 2032 (combined)	400,690	190,652	591,342
2033 – 2037 (combined)	397,435	74,781	472,216
2038 – 2041 (combined)	<u>111,095</u>	<u>11,892</u>	<u>122,987</u>
Total Requirements	<u>\$ 2,323,775</u>	<u>\$ 1,135,670</u>	<u>\$ 3,459,445</u>

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, 2017 for the issues.

The following bonds have been issued and are outstanding at December 31, 2017:

<u>Date</u>	<u>Issue</u>	<u>Final Maturity</u>	<u>Interest Rate</u>	<u>Original Amount</u>	<u>Outstanding Amount</u>
(thousands of dollars)					
<u>Electric Revenue Bonds</u>					
06/15/1997	1997 Series K Bonds	07/01/2024	5.25% - 5.9%	\$ 131,030	\$ 117,625
06/09/2008	2008 Series U Bonds	08/15/2028	3.0% - 5.0%	521,730	219,895
05/15/2009	2009 Series V Bonds	05/15/2036	6.322%	200,000	200,000
07/29/2010	2010 Series W Bonds	05/15/2036	6.156%	250,000	250,000
10/04/2011	2011 Series X Bonds	08/15/2028	1.5% - 5.0%	325,550	228,995
05/31/2012	2012 Series Y Bonds	08/15/2033	3.0% - 5.0%	196,945	185,515
05/21/2013	2013 Series A Bonds	08/15/2041	3.75% - 5.0%	132,020	132,020
05/21/2013	2013 Series B Bonds	08/15/2033	3.0% - 5.0%	118,615	97,220
07/14/2016	2016 Series D Bonds	08/15/2028	2.0% - 5.0%	149,890	149,890
12/14/2017	2017 Series E Bonds	08/15/2028	5.0%	202,500	202,500
<u>JPA Electric Revenue Bonds</u>					
08/19/2009	2009 CVFA Bonds	07/01/2020	2.25% - 5.25%	\$ 48,920	\$ 15,555
08/19/2009	2009 SCA Bonds	07/01/2021	4.0% - 5.25%	57,530	24,695
06/03/2015	2015 SFA Bonds	07/01/2030	2.0% - 5.0%	193,335	146,640
05/31/2007	2007B NCGA#1 Bonds	07/01/2027	Index Rate	668,470	264,475
<u>Subordinated Electric Revenue Bonds</u>					
10/27/2016	2016 Series N Bonds	08/15/2041	Index Rate	\$ 72,000	\$ 44,375
10/27/2016	2016 Series O Bonds	08/15/2041	Index Rate	72,000	44,375

2017 Bond Refunding. In December 2017, SMUD issued \$202.5 million of 2017 Series E Electric Revenue Refunding Bonds. The purpose of this transaction was to refund variable rate debt with fixed rate debt to reduce the risk of increased interest rates. Proceeds from the 2017 Series Bonds, in addition to \$13.0 million of funds on hand, were used to defease \$26.1 million of a portion of the Series 2016 N bonds, \$26.1 million of a portion of the Series 2016 O bonds, \$120.0 million of all of the outstanding 2016 Series P bonds, and \$77.9 million of all of the outstanding Series 2016 Q bonds. A total of \$250.1 million bonds were defeased through a legal defeasance, and accordingly, the liability for the defeased bonds has been removed from Long-Term Debt – net in the Consolidated Statements of Net Position. The refunding resulted in the recognition of a deferred accounting loss of \$5.5 million, which is being amortized over the life of the refunding issue. Based on an assumed LIBOR rate of 1.7 percent for the life of the debt, the 2017 refunding increased future aggregate debt service payments by \$0.6 million and resulted in a total economic loss of \$1.4 million, which is the difference between the present value of the old and new debt service payments.

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 - net 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.

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
\$ 117,625	Variable	5.154%	SIFMA	07/01/24	BBB+
26,015	Fixed	4.345%	70% of LIBOR	08/15/18	AA-
96,100	Fixed	2.894%	63% of LIBOR	08/15/28	BBB+
79,714	Fixed	1.172%	67% of LIBOR	08/15/28	AA-
120,446	Fixed	1.113%	67% of LIBOR	08/15/28	A+

SMUD has a fixed-to-variable interest rate swap agreement with a notional amount of \$117.6 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 (1.71 percent at December 31, 2017) 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 \$117.6 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 \$122.1 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 two 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
\$ 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, 2017, NCGA had two 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 (1.69 percent at December 31, 2017) plus an interest rate spread, as specified in each swap agreement. The total notional amount of the two swaps at December 31, 2017 was \$264.5 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. During 2017 and 2016, SMUD paid interest on both series on a monthly basis at the rate of 67 percent of one-month LIBOR plus a fixed fee. Following tax reform, on January 1 2018, SMUD will pay interest at the rate of 85 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, however the 2017 Bond Refunding defeased all the maturities between 2018 and 2028. The term is 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 remain unchanged 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 were renamed the 2016 Series P and the 2016 Series Q Bonds, and SMUD paid interest on a monthly basis at the rate of 67 percent of one-month LIBOR plus a fixed fee. As a result of the 2017 Bond Refunding, all of the 2016 Series P and Series Q bonds were defeased.

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 \$538.8 million of Electric Revenue Bonds that are currently callable, \$450.0 million of which are fixed rate Build America Bonds debt and \$88.8 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 2017. 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, 2017.

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,	
	2017	2016
	(thousands of dollars)	
Pledged future revenues	\$ 2,323,775	\$ 2,531,960
Principal and interest payments for the year ended	\$ 273,549	\$ 269,141
Total net revenues for the year ended	\$ 786,647	\$ 786,764
Total remaining principal and interest to be paid	\$ 3,459,445	\$ 3,724,778
Annual principal and interest payments as a percent of net revenues		
For the year ended	35%	34%

NOTE 11. COMMERCIAL PAPER NOTES

SMUD issues Commercial Paper Notes (Notes) to finance or reimburse capital expenditures. At December 31, 2017 and 2016 Notes outstanding totaled \$200.0 million. The average interest rate for the Notes outstanding at December 31, 2017 and 2016 was 1.03 percent and .75 percent and the average term was 80 days and 68 days, respectively. 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 2017 and 2016 is presented below:

	Balance at Beginning of Year	Additions	Reductions	Balance at End of Year
	(thousands of dollars)			
December 31, 2017	\$ 200,000	\$ -0-	\$ -0-	\$ 200,000
December 31, 2016	\$ 200,000	\$ -0-	\$ -0-	\$ 200,000

NOTE 12. FAIR VALUE MEASUREMENT

Effective January 1, 2016, SMUD adopted GASB No. 72, which 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 and/or observable market prices.
- 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, 2017 and 2016, 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

	<u>At fair value as of December 31, 2017</u>		
	<u>Level 1</u>	<u>Level 2</u>	<u>Total</u>
	(thousands of dollars)		
Investments, including cash and cash equivalents:			
LAIF	\$ -0-	\$ 119,832	\$ 119,832
U.S. Government Agency Obligations	-0-	263,578	263,578
U.S. Treasury Obligations	163,120	-0-	163,120
Corporate Notes	-0-	106,170	106,170
Municipal Bonds	-0-	<u>15,073</u>	<u>15,073</u>
Total Investments, including cash and cash equivalents	<u>\$ 163,120</u>	<u>\$ 504,653</u>	<u>\$ 667,773</u>
Investment Derivative Instrument Assets:			
Gas related agreements	<u>\$ 1</u>	<u>\$ -0-</u>	<u>\$ 1</u>
Total Investment Derivative Instrument Assets	<u>\$ 1</u>	<u>\$ -0-</u>	<u>\$ 1</u>
Investment Derivative Instrument Liabilities:			
Gas related agreements	\$ 5,536	\$ -0-	\$ 5,536
Interest rate swap agreements	<u>-0-</u>	<u>8,994</u>	<u>8,994</u>
Total Investment Derivative Instrument Liabilities	<u>\$ 5,536</u>	<u>\$ 8,994</u>	<u>\$ 14,530</u>
	<u>At fair value as of December 31, 2016</u>		
	<u>Level 1</u>	<u>Level 2</u>	<u>Total</u>
	(thousands of dollars)		
Investments, including cash and cash equivalents:			
LAIF	\$ -0-	\$ 130,689	\$ 130,689
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	<u>-0-</u>	<u>23,082</u>	<u>23,082</u>
Total Investments, including cash and cash equivalents	<u>\$ 58,759</u>	<u>\$ 571,485</u>	<u>\$ 630,244</u>
Investment Derivative Instrument Assets:			
Gas related agreements	<u>\$ 595</u>	<u>\$ -0-</u>	<u>\$ 595</u>
Total Investment Derivative Instrument Assets	<u>\$ 595</u>	<u>\$ -0-</u>	<u>\$ 595</u>
Investment Derivative Instrument Liabilities:			
Gas related agreements	\$ 3,578	\$ -0-	\$ 3,578
Interest rate swap agreements	<u>-0-</u>	<u>12,584</u>	<u>12,584</u>
Total Investment Derivative Instrument Liabilities	<u>\$ 3,578</u>	<u>\$ 12,584</u>	<u>\$ 16,162</u>

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 shutdown permanently in June 1989. Decommissioning will require termination of the Part 50 license that now only consists of the Interim Onsite Storage Building (IOSB) on a 1-acre site and the separately licensed Independent Spent Fuel Storage Installation (ISFSI) facility licensed under Part 72. 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) licenses and release of the property for unrestricted use. The NRC approved SMUD's decommissioning plan in March 1995 and SMUD began decommissioning in February 1997. Decommissioning of the Part 50 licensed facility involved a phased process and the first phase of physical work was completed in 2009, when a majority of the facility land area, including the major plant systems and structures, was released from licensed control. Final decommissioning of the ISFSI will occur after the spent nuclear fuel (SNF) and high level waste are removed from the site and SMUD demonstrates that the site is suitable for release in accordance with release criteria specified in 10 CFR 20, Part E and the approved License Termination Plan.

In 2009, the NRC released all of the land formerly under the Part 50 license for unrestricted use with the exception of the IOSB, which contained some Class B and Class C radioactive waste (Low-Level Radioactive Waste: LLRW) produced during the decommissioning of the nuclear reactor facility. In 2014, this waste was shipped to a suitable disposal facility. In 2016, Phase II decommissioning of the IOSB was completed, including the Final Site Status Surveys that demonstrate that the IOSB and surrounding site are suitable for release. With the submittal of the Final Status Survey Summary Report and accompanying License Amendment Request, the former Part 50 operating license should be terminated in 2018.

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 stored in the Part 72 licensed ISFSI. SMUD has a contract with the DOE for the removal and disposal of SNF and high-level (Greater Than Class "C": GTCC) radioactive waste. All of SMUD's SNF and GTCC waste are currently stored in sealed canisters in the ISFSI. However, the date when DOE will remove the fuel and GTCC 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, several companies have applied to the NRC to construct and operate a Consolidated Interim Storage Facility that would store SNF and GTCC on an interim basis. These applications are in process. If the NRC licenses one or both of these facilities, Congress will have to modify the Nuclear Waste Policy Act (NWPA) to allow for its use. Currently, Rep. Doris Matsui and 109 other members of Congress have co-sponsored H.R. 3053 – the Nuclear Waste Policy Amendments Act. This bill includes a Consolidated Interim Storage Facility pilot program to remove fuel from permanently shut down sites like Rancho Seco. Passage of this legislation would be a significant step towards removal of the used nuclear fuel from the Rancho Seco facility. Until then, SMUD is committed to the safe and secure storage of its SNF and GTCC waste under its Part 72 license until DOE fulfills its obligation to dispose of this material in accordance with NWPA.

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 2017 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,	
	2017	2016
	(thousands of dollars)	
Active decommissioning	\$ 14,559	\$ 13,787
Spent fuel management	<u>135,221</u>	<u>134,183</u>
Total ARO	\$ 149,780	\$ 147,970
Less: current portion	<u>(5,775)</u>	<u>(6,439)</u>
Total non-current portion of ARO	<u>\$ 144,005</u>	<u>\$ 141,531</u>

The summarized activity of the Rancho Seco ARO during 2017 and 2016 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,	
	2017	2016
	(thousands of dollars)	
ARO at beginning of year	\$ 147,970	\$ 150,372
Accretion	7,521	7,429
Expenditures	(7,439)	(9,207)
Change in study	2,969	2,033
Annual adjustments	<u>(1,241)</u>	<u>(2,657)</u>
ARO at end of year	<u>\$ 149,780</u>	<u>\$ 147,970</u>

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 plans and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the 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.

Plan Description and Benefits Provided. SMUD participates in PERS, an agent multiple-employer public employee defined benefit pension plan (PERS 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, 2016 and June 30, 2015.

SMUD also provides a supplemental benefit in lieu of PERS' Single Highest Year (SHY) for certain represented employees hired before January 1, 2013. For these employees, if the present value of pension allowance under the PERS Plan with the employer paid member contributions (EPMC) benefit enhancement program is less than the present value of what the employee would have received under the PERS Plan benefit with SHY earnings but no EPMC, SMUD pays a lump sum equivalent to the difference. There are no assets accumulated in a trust for SHY. SMUD implemented GASB No. 73 to record SHY in 2017 (see Note 3).

GASB No. 68 and GASB No. 73 require that the reported results must pertain to liability and asset information within certain defined timeframes. The following timeframes are used for the year ended:

PERS Plan	December 31,	
	2017	2016
Valuation date	June 30, 2016	June 30, 2015
Measurement date	June 30, 2017	June 30, 2016

SHY	December 31,	
	2017	2016
Valuation date and Measurement date	June 30, 2017	N/A

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

PERS Plan	December 31,	
	2017	2016
Inactive employees or beneficiaries currently receiving benefit payments	2,777	2,718
Inactive employees entitled to but not yet receiving benefit payments	921	944
Active employees	<u>2,125</u>	<u>2,014</u>
Total employees covered by benefit terms	<u><u>5,823</u></u>	<u><u>5,676</u></u>

SHY	December 31,	
	2017	2016
Inactive employees or beneficiaries currently receiving benefit payments	-0-	N/A
Inactive employees entitled to but not yet receiving benefit payments	-0-	
Active employees	<u>276</u>	
Total employees covered by benefit terms	<u><u>276</u></u>	

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, 2017 and 2016, the average active employee contribution rate is 6.9 percent of annual pay for both years, and the employer's contribution rate is 16.0 percent and 14.1 percent of annual payroll, respectively. Employer contribution rates may change if plan contracts are amended. For the year ended December 31, 2017 and 2016, SMUD made contributions recognized by the PERS Plan in the amount of \$32.4 million and \$27.6 million, respectively.

Net Pension Liability. SMUD's NPL at December 31, 2017 and 2016 was measured at June 30, 2017 and 2016, respectively. The total pension liability used to calculate the NPL was determined by actuarial valuations as of June 30, 2016 and 2015 rolled forward using generally accepted actuarial procedures to the June 30, 2017 and 2016 measurement dates for the PERS Plan and an actuarial valuation as of June 30, 2017 for SHY.

Actuarial Methods and Assumptions. The actuarial methods and assumptions used for the December 31, 2017 and December 31, 2016 total pension liabilities are as follows for the PERS Plan:

Actuarial Cost Method	Entry age normal
Discount Rate	7.15% (2017), 7.65% (2016)
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.

The actuarial methods and assumptions used for the December 31, 2017 total pension liabilities are as follows for SHY:

Actuarial Cost Method	Entry age normal
Discount Rate	Bond Buyer 20 Index - 3.58%
Inflation	2.75%
Salary Increases	3.00%; merit: PERS 1997-2011 Experience Study
Mortality, retirement, disability, Termination	PERS 1997-2011 Experience Study
Mortality Improvement	Mortality projected 20 years with Scale BB

Discount Rates. For the PERS Plan, the discount rate used to measure the total pension liability for the years ended December 31, 2017 and 2016 was 7.15 percent and 7.65 percent, respectively. 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 discount rates used for the valuations are appropriate and the use of the municipal bond rate calculation is not deemed necessary. The long-term expected discount rates are 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 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 used for the June 30, 2016 valuation was adopted by the PERS' Board effective on July 1, 2014.

<u>Asset Class</u>	<u>Current Target Allocation</u>	<u>Real Return Years 1-10</u>	<u>Real Return Years 11+</u>
Global Equity	47.0%	4.9%	5.38%
Global Fixed Income	19.0%	.8%	2.27%
Inflation Sensitive	6.0%	.6%	1.39%
Private Equity	12.0%	6.6%	6.63%
Real Estate	11.0%	2.8%	5.21%
Infrastructure and Forestland	3.0%	3.9%	5.36%
Liquidity	2.0%	(2.2%)	(2.70%)

The target allocation shown below used for the June 30, 2015 valuation was adopted by the PERS' Board effective on July 1, 2014.

<u>Asset Class</u>	<u>Current Target Allocation</u>	<u>Real Return Years 1-10</u>	<u>Real Return Years 11+</u>
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, 2017:

	<u>Total Pension Liability (a)</u>	<u>Increase (Decrease) Plan Fiduciary Net Position (b)</u>	<u>Net Pension Liability (a) – (b)</u>
	(thousands of dollars)		
Balances at January 1, 2017	\$ 2,040,497	\$ 1,541,269	\$ 499,228
Changes recognized for the measurement period:			
Service cost	35,340	-0-	35,340
Interest	150,312	-0-	150,312
Changes in assumptions	122,216	-0-	122,216
Differences between expected and actual experience	(30,190)	-0-	(30,190)
Contributions – employer	-0-	32,389	(32,389)
Contributions – employee	-0-	15,845	(15,845)
Net investment income	-0-	171,596	(171,596)
Benefit payments	(104,428)	(104,428)	-0-
Administrative expense	-0-	(2,275)	2,275
GASB No. 73 implementation adjustment	6,449	-0-	6,449
Net changes	<u>179,699</u>	<u>113,127</u>	<u>66,572</u>
Balances at December 31, 2017	<u>\$ 2,220,196</u>	<u>\$ 1,654,396</u>	<u>\$ 565,800</u>

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

	<u>Total Pension Liability (a)</u>	<u>Increase (Decrease) Plan Fiduciary Net Position (b)</u> (thousands of dollars)	<u>Net Pension Liability (a) – (b)</u>
Balances at January 1, 2016	\$ 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	<u>69,029</u>	<u>(48,858)</u>	<u>117,887</u>
Balances at December 31, 2016	<u>\$ 2,040,497</u>	<u>\$ 1,541,269</u>	<u>\$ 499,228</u>

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:

	<u>1% Decrease (6.15%)</u>	<u>Current Discount Rate (7.15%)</u> (thousands of dollars)	<u>1% Increase (8.15%)</u>
PERS Plan			
Plan's NPL, December 31, 2017	\$ 855,323	\$ 560,599	\$ 316,456
	<u>1% Decrease (6.65%)</u>	<u>Current Discount Rate (7.65%)</u> (thousands of dollars)	<u>1% Increase (8.65%)</u>
Plan's NPL, December 31, 2016	\$ 762,987	\$ 499,228	\$ 280,048
SHY	<u>1% Decrease (2.58%)</u>	<u>Current Discount Rate (3.58%)</u> (thousands of dollars)	<u>1% Increase (4.58%)</u>
Plan's NPL, December 31, 2017	\$ 6,373	\$ 5,201	\$ 4,280

Pension Plan Fiduciary Net Position. Detailed information about the PERS Plan's fiduciary net position is available in the separately issued PERS Plan financial statements. This report, the audited financial statements, and other reports 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, 2017 and 2016, SMUD recognized pension expense of \$78.5 million and \$39.2 million, respectively.

At December 31, 2017 and December 31, 2016, SMUD reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	December 31,	
	2017	2016
	(thousands of dollars)	
Deferred outflows of resources:		
Changes of assumptions	\$ 90,688	\$ -0-
Differences between projected and actual earnings on pension plan investments	21,648	83,954
Employer's contributions to the Plan subsequent to the measurement of total pension liability	30,698	32,299
Total deferred outflows or resources	\$ 143,034	\$ 116,253
Deferred inflows of resources:		
Changes of assumptions	\$ (5,636)	\$ (14,669)
Differences between expected and actual experience	(27,285)	(10,518)
Total deferred inflows of resources	\$ (32,921)	\$ (25,187)

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:	
2018	\$ 15,052
2019	50,502
2020	27,092
2021	(12,810)
2022	(62)
Thereafter	(360)

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 \$4.4 million in 2017 and \$3.9 million in 2016. 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 \$21.3 million in 2017 and \$19.7 million in 2016.

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 benefit, 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, 2017, 5,205 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 elected to put additional contributions into the trust in 2017 and 2016 of \$84.7 million and \$17.9 million, respectively. In 2017 and 2016, the net ARC contribution to the CERBT was \$7.7 million and \$6.6 million, respectively. During 2017 and 2016, SMUD made healthcare benefit contributions by paying actual medical costs of \$23.8 million and \$20.7 million, respectively.

Funding Status and Funding Progress. At June 30, 2017 and 2016, SMUD estimates that the actuarially determined accumulated postemployment benefit obligation was approximately \$442.4 million and \$377.0 million, respectively. At June 30, 2017 and 2016, the plan was 77.2 percent and 59.7 percent funded, respectively. The covered payroll (annual payroll of active employees covered by the plan) at June 30, 2017 and 2016, was \$224.2 million and \$210.3 million, respectively. The ratio of the unfunded actuarial accrued liability (UAAL) to covered payroll was 45.1 percent and 72.3 percent at June 30, 2017 and 2016, respectively.

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 2017 and 2016, SMUD's annual OPEB cost (expense) was \$14.9 million and \$13.4 million, respectively.

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:

	<u>Year Ended December 31,</u>	
	<u>2017</u>	<u>2016</u>
	(thousands of dollars)	
Annual required contribution	\$ 16,472	\$ 14,760
Interest on net OPEB asset	(9,010)	(6,772)
Annual required contribution adjustment	<u>7,397</u>	<u>5,455</u>
Annual OPEB cost	14,859	13,443
Contributions made	<u>(116,181)</u>	<u>(45,270)</u>
Changes in net OPEB asset	(101,322)	(31,827)
Net OPEB asset, beginning of year	<u>(127,907)</u>	<u>(96,080)</u>
Net OPEB asset, end of year	<u>\$ (229,229)</u>	<u>\$ (127,907)</u>

SMUD's net OPEB asset is recorded as a component of Prepayments and Other under Noncurrent Assets 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 2017 and the two preceding years is as follows:

<u>Year Ending</u>	<u>Annual OPEB Cost</u>	<u>Percentage of Annual OPEB Cost Contributed</u>	<u>Net OPEB Asset</u>
	(thousands of dollars)		
December 31, 2017	\$ 14,859	782%	\$ (229,229)
December 31, 2016	13,443	377%	(127,907)
December 31, 2015	27,690	166%	(96,080)

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, 2017 and 2016 actuarial valuations. The actuarial assumptions used for the June 30, 2017 and 2016 valuations were 6.75 percent and 7.25 percent investment rate of return (net of administrative expenses) and 2.75 percent and 3.0 percent inflation assumption, respectively. The actuarial assumptions for an annual healthcare cost trend growth rate for 2017 and 2018 was based on actual and preliminary premiums, respectively, and ranged from 6.5 to 7.5 percent for 2019. The UAAL at June 30, 2017 is amortized as a level percentage of payroll over a closed 28-year period. At June 30, 2017 and 2016 the actuarial value of the assets was \$341.4 million and \$225.0 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 multi-year 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, cyber activities, natural disasters, employee injuries and illnesses, and others. 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 2017, 2016 and 2015, 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 and Other Liabilities in the Consolidated Statements of Net Position.

SMUD's total claims liability, comprising claims received and claims incurred but not reported, at December 31, 2017, 2016 and 2015 is presented below:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
		(thousands of dollars)	
Workers' compensation claims	\$ 9,823	\$ 10,820	\$ 10,983
General and auto claims	1,941	2,227	698
Short and long-term disability claims	<u>113</u>	<u>212</u>	<u>343</u>
Claims liability	<u>\$ 11,877</u>	<u>\$ 13,259</u>	<u>\$ 12,024</u>

Changes in SMUD's total claims liability during 2017, 2016 and 2015 are presented below:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
		(thousands of dollars)	
Claims liability, beginning of year	\$ 13,259	\$ 12,024	\$ 12,166
Add: provision for claims, current year	1,840	2,304	1,827
Increase in provision for claims in prior years	1,595	5,638	2,782
Less: payments on claims attributable to current and prior years	<u>(4,817)</u>	<u>(6,707)</u>	<u>(4,751)</u>
Claims liability, end of year	<u>\$ 11,877</u>	<u>\$ 13,259</u>	<u>\$ 12,024</u>

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, 2017, the approximate minimum obligations for the "take-or-pay" contracts over the next five years are as follows:

	<u>Electric</u>	<u>Gas</u>
	(thousands of dollars)	
2018	\$ 44,324	\$ 12,133
2019	43,054	11,724
2020	40,882	11,812
2021	33,512	11,963
2022	33,946	12,021

At December 31, 2017, the approximate minimum obligations for the remaining contracts, assuming the energy or gas is delivered over the next five years, are as follows:

	<u>Electric</u>	<u>Gas</u>
	(thousands of dollars)	
2018	\$ 150,478	\$ 110,161
2019	190,883	95,650
2020	198,400	94,145
2021	202,267	86,778
2022	143,316	82,667

Contractual Commitments beyond 2022 – Electricity. Several of SMUD's purchase power and transmission contracts extend beyond the five-year summary presented above. These contracts expire between 2023 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 \$34.4 million in 2023 and \$7.7 million in 2033. SMUD estimates its annual minimum commitments under the remaining contracts, assuming the energy is delivered, ranges between \$144.7 million in 2023 and \$0.2 million in 2043. SMUD's largest purchase power source (in volume) is the Western Base Resource contract, whereby SMUD receives 25.5 percent of the amount of energy made available by Western, which equals an equal share of their revenue requirement. The Western contract expires on December 31, 2024.

Contractual Commitments beyond 2022 - 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 2023 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 \$12.2 million in 2023 and \$5.8 million in 2040. SMUD estimates its annual minimum commitments under the remaining contracts, assuming the gas is delivered, ranges between \$82.3 million in 2023 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. In October 2017, SMUD submitted its notice of intent to exercise this option upon the sixth anniversary of commercial operation date which is April 26, 2018.

Gas Price Swap Agreements. SMUD has entered into numerous variable to fixed rate swaps with notional amounts totaling 120,522,500 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 \$2.61 to \$7.17 per Dth. The swap agreements expire periodically from January 2018 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 2020, dropping to 1.0 million Dth through March 2023.

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, 2017.

Construction Contracts. In December 2017, the SMUD Board authorized a contract for the renovation of the Headquarters building located in Sacramento. The contract price is a not-to-exceed amount of \$72.7 million. The contract term ends March 31, 2019. Additionally, a contract was signed to replace the hot gas combusters at SFA. The contract price is for \$35.6 million over three years. As of December 31, 2017, \$72.0 million and \$34.6 million, respectively, remain on these 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. As of December 31, 2017, \$8.9 million remains available for this contract.

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 on 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 services under the Natural Gas Act; and (vi) filings initiated by NERC to develop reliability standards applicable to owners, users, and operators of the bulk electric system. In addition, SMUD is an active participant in other FERC administrative proceedings, including those related to reliability and cybersecurity standards, variable resource integration, and transmission planning and cost allocation. 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 settlements or consent orders will be reopened, the possibility exists. If any of the settlements or consent orders were to be 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 Environmental 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 and plans to decommission the facility in the next few years. 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 established a regulatory asset to defer recognition of the expense related to the investigation, design and remediation necessary for the North City Site, and recorded a liability for the full \$12.0 million estimated for the project. In 2012, the regulatory asset was fully amortized. As the owner of the North City Site, SMUD will play the principal role in the remediation selection and activities. SMUD has estimated the total exposure for closing the site at as high as \$12.0 million based on initial tests and studies of the site and approve and implemented cap designs for nearby former landfill areas. Costs could exceed that amount based on the need to design around transmission-related infrastructure improvements. SMUD's management does not believe this will occur. Even if remediation costs associated with the North City Site were to increase, SMUD management believes that any increased costs will not have a material adverse impact on SMUD's financial position, liquidity or results of operations.

Station E Site Remediation. In October 2013, SMUD purchased property for development of a new substation to replace North City Substation (Station E). Initial development of the site in 2016 uncovered solid waste in quantities not indicated by pre-purchase due diligence. SMUD thereafter worked with the Sacramento County Environmental Management Division, the local enforcement agency for the California Department of Resources Recycling and Recovery to obtain approval of soil handling and land use plans for development of the site, which approval was given in third quarter 2017. The plans include installing a final cover, grading, drainage, maintenance, and landfill gas control measures at the site. The estimated costs of implementing these plans are estimated at \$16.1 million and SMUD recorded a liability for those costs in 2016. The ultimate financial responsibility for the closure activities has not been determined and remains uncertain, though SMUD is investigating which parties may have been responsible for the disposal and will pursue appropriate action to ensure those parties pay the costs of remediation. SMUD management believes that any increased costs ultimately borne by SMUD 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 of its intent to terminate its existing power purchase agreement in accordance with the terms of the power purchase agreement, 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 attempt 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 6, 2016. Buena Vista claims damages against SMUD in excess of \$130.0 million on a theory of wrongful termination. SMUD is defending the action and expects to prevail due to the clear language in the Purchase Power Agreement (PPA) which allows for termination for failure to meet contractual energy production figures for multiple consecutive years. The arbitration hearing concluded in early December 2017. We expect a ruling by the arbitrator in April 2018. 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.

Patua Acquisition Company, LLC. On April 16, 2010, SMUD entered into a 23-year PPA with Patua Project, LLC. The fifth amendment to the PPA was signed on November 30, 2016, with the new project owner, Patua Acquisition Company, LLC. The PPA requires Patua to provide a warranty for the annual amount of energy and green attributes produced and delivered to SMUD. If Patua fails to meet the warranty for two consecutive years, it triggers SMUD's right to reduce the Guaranteed Capacity and Transmission Capacity Requirement as defined in the PPA.

On February 16, 2017, SMUD sent Patua a Notice of Failure to Meet Annual Performance Guarantee, Reduction of Phase 1 Guaranteed Capacity Resizing, and Reduction of Transmission Capacity Requirement pursuant to the terms of the PPA. Patua disagreed with the reductions and on June 9, 2017, after meetings with SMUD staff, sent a letter requesting a meeting with a senior officer to work towards a resolution in accordance with the dispute resolution provisions of the PPA. A meeting of the senior officers occurred. Staff continues to work through the issue with Patua. 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.

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

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

PERS Plan. 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,			
	2017	2016	2015	2014
	(thousands of dollars)			
Total pension liability:				
Service cost	\$ 35,040	\$ 29,044	\$ 27,991	\$ 28,170
Interest	150,119	147,497	142,468	137,546
Changes of assumptions	123,043	-0-	(34,228)	-0-
Differences between expected and actual experience	(29,276)	(8,357)	(10,613)	-0-
Benefit payments, including refunds of employee contributions	(104,428)	(99,155)	(94,636)	(90,175)
Net change in total pension liability	174,498	69,029	30,982	75,541
Total pension liability, beginning of year	2,040,497	1,971,468	1,940,486	1,864,945
Total pension liability, end of year (a)	<u>\$ 2,214,995</u>	<u>\$ 2,040,497</u>	<u>\$ 1,971,468</u>	<u>\$ 1,940,486</u>
Plan fiduciary net position:				
Contributions - employer	\$ 32,389	\$ 27,645	\$ 22,499	\$ 21,511
Contributions - employee	15,845	15,271	14,503	15,346
Net investment income	171,596	8,316	35,797	245,659
Benefit payments, including refunds of employee contributions	(104,428)	(99,155)	(94,636)	(90,175)
Administrative expense	(2,275)	(969)	(1,795)	(2,028)
Other changes	-0-	34	(25)	-0-
Net change in plan fiduciary net position	113,127	(48,858)	(23,657)	190,313
Plan fiduciary net position, beginning of year	1,541,269	1,590,127	1,613,784	1,423,471
Plan fiduciary net position, end of year (b)	<u>\$ 1,654,396</u>	<u>\$ 1,541,269</u>	<u>\$ 1,590,127</u>	<u>\$ 1,613,784</u>
Net pension liability, ending (a) - (b)	<u>\$ 560,599</u>	<u>\$ 499,228</u>	<u>\$ 381,341</u>	<u>\$ 326,702</u>
Plan fiduciary net position as a percentage of the total pension liability	74.7%	75.5%	80.7%	83.2%
Covered payroll	\$ 223,685	\$ 207,119	\$ 197,481	\$ 191,439
Net pension liability as a percentage of covered payroll	250.6%	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, 2016 valuation date. This applies for voluntary benefit changes as well as any offers of two years additional service credit.

Changes in Assumptions: In 2017, the accounting discount rate reduced from 7.65 percent to 7.15 percent. In 2016, there were no changes. In 2015, amounts reported reflect an adjustment of the discount rate from 7.5 percent (net of administrative expense) to 7.65 percent (without a reduction for pension plan administrative expense). In 2014, amounts reported were based on the 7.5 percent discount rate.

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

SHY. 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,	
	2017	2016
	(thousands of dollars)	
Total pension liability:		
Service cost	\$ 300	\$ 218
Interest	193	195
Changes of assumptions	(827)	1,118
Differences between expected and actual experience	(914)	-0-
Benefit payments, including refunds of employee contributions	-0-	-0-
Net change in total pension liability	(1,248)	1,531
Total pension liability, beginning of year	6,449	4,918
Total pension liability, end of year	\$ 5,201	\$ 6,449
Covered payroll	\$ 21,743	\$ 21,748
Net pension liability as a percentage of covered payroll	23.9%	29.7%

Notes to Schedule

Benefit Changes: There were no changes to benefits.

Changes in Assumptions: In 2017, the accounting discount rate increased from 2.85 percent to 3.58 percent.

Schedule of Plan Contributions

PERS Plan. 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,			
	2017	2016	2015	2014
	(thousands of dollars)			
Actuarially determined contribution	\$ 32,389	\$ 27,645	\$ 22,499	\$ 21,511
Contributions in relation to the actuarially determined contribution	<u>(32,389)</u>	<u>(27,645)</u>	<u>(22,499)</u>	<u>(21,511)</u>
Contribution deficiency (excess)	<u>\$ -0-</u>	<u>\$ -0-</u>	<u>\$ -0-</u>	<u>\$ -0-</u>
Covered payroll	\$ 236,219	\$ 222,133	\$ 213,627	\$ 195,394
Contributions as a percentage of covered payroll	13.7%	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, 2017 was derived from the June 30, 2014 funding valuation report.

Actuarial cost method	Entry age normal
Amortization method/period	For details, see June 30, 2014 Funding Valuation Report
Asset valuation method	Market value of assets. For details, see June 30, 2014 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 2011 PERS Experience Study for the period from 1997 to 2011
Mortality	The probabilities of mortality are based on the 2011 PERS Experience Study for the period from 1997 to 2011. Pre-retirement and post-retirement mortality rates include 5 years of projected mortality improvement using Scale AA published by the Society of Actuaries.

Prior to 2017, the retirement age and mortality assumptions were based on the 2010 PERS Experience Study for the period from 1997 to 2007. In addition, the mortality assumption for pre-retirement and post-retirement rates included 5 years of projected mortality improvement using Scale AA published by the Society of Actuaries.

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)						
06/30/2017	\$ 341,403	\$ 442,414	\$ 101,011	77.2%	\$ 224,202	45.1%
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%