KPMG

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Financial Statements and
Required Supplementary Information

June 30, 2018 and 2017

(With Independent Auditors' Report Thereon)

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

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KPMG LLP
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Independent Auditors' Report

The Board of Water and Power Commissioners
City of Los Angeles
Department of Water and Power:

Report on the Financial Statements

We have audited the accompanying financial statements of the City of Los Angeles Department of Water and Power Power Revenue Fund (Power System), an enterprise fund of the City of Los Angeles, California, as of and for the years ended June 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Power System's basic financial statements for the years then ended, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of 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 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 financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the 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 relevant to the entity's preparation and fair presentation of the 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 entity'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 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 financial statements referred to above present fairly, in all material respects, the financial position of the City of Los Angeles Department of Water and Power Power Revenue Fund as of June 30, 2018 and 2017, and the changes in its financial position and its cash flows for the years then ended, in accordance with U.S. generally accepted accounting principles.

Emphasis of Matters

As discussed in note 1(a) to the financial statements, the financial statements present only the Power System and do not purport to, and do not, present fairly the financial position of the City of Los Angeles, California as of June 30, 2018 and 2017 the changes in its financial position, or where applicable, its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles. Our opinion is not modified with respect to this matter.

As discussed in Note 2 (a) to the financial statements, in fiscal year 2018, the Power System adopted the provisions of Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis on pages 3–18 and the other required supplementary information on pages 96–102 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic 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 basic financial statements, and other knowledge we obtained during our audit of the basic 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 have also issued our report dated November 30, 2018, on our consideration of the Power System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely 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 effectiveness of the Power System's 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 the Power System's internal control over financial reporting and compliance.

KPMG LLP

Los Angeles, California
November 30, 2018

The following discussion and analysis of the financial performance of the City of Los Angeles Department of Water and Power's Power Revenue Fund (the Power System) provides an overview of the financial activities for the fiscal years ended June 30, 2018 and 2017. Descriptions and other details pertaining to the Power System are included in the notes to the financial statements. This discussion and analysis should be read in conjunction with the Power System's financial statements, which begin on page 19.

Using this Financial Report

This annual financial report consists of the Power System's financial statements and required supplementary information and reflects the self-supporting activities of the Power System that are funded primarily through the sale of energy, transmission, and distribution services to the public it serves.

Statements of Net Position; Statements of Revenue, Expenses, and Changes in Net Position; and Statements of Cash Flows

The financial statements provide an indication of the Power System's financial health. The statements of net position include all of the Power System's assets, deferred outflows, liabilities, deferred inflows, and net position using the accrual basis of accounting, as well as an indication about which assets can be utilized for general purposes and which assets are restricted as a result of bond covenants and other commitments as of June 30, 2018 and 2017. The statements of revenue, expenses, and changes in net position report all of the revenue and expenses during the fiscal years ended June 30, 2018 and 2017. The statements of cash flows report the cash provided by and used in operating activities, noncapital financing activities, capital and related financing activities, and investing activities during the fiscal years ended June 30, 2018 and 2017.

The following tables summarize the financial condition and changes in net position of the Power System as of and for the fiscal years ended June 30, 2018, 2017, and 2016:

Table 1 – Condensed Schedule of Assets, Deferred Outflows, Liabilities, Deferred inflows, and Net Position

(Amounts in millions)

		June 30		
Assets and Deferred Outflows		**2018**	**2017**	**2016**
Utility plant, net	$	11,377	10,773	10,322
Restricted investments		602	593	595
Other noncurrent assets		2,686	3,045	2,947
Current assets		2,419	2,449	2,484
Deferred outflows		817	1,098	514
	$	17,901	17,958	16,862
Net Position, Liabilities, and Deferred Inflows				
Net position:				
Net investment in capital assets	$	1,773	1,433	1,342
Restricted		883	1,484	1,396
Unrestricted		2,729	2,851	2,853
Total net position		5,385	5,768	5,591
Long-term debt, net of current portion		9,507	9,276	8,943
Other long-term liabilities		1,388	1,575	858
Current liabilities		1,060	980	864
Deferred inflows		561	359	606
		12,516	12,190	11,271
	$	17,901	17,958	16,862

(Continued)

Table 2 – Condensed Schedule of Revenue, Expenses, and Changes in Net Position

(Amounts in millions)

	Year ended June 30		
	2018	**2017**	**2016**
Operating revenues:			
Residential	$ 1,266	1,180	1,127
Commercial and industrial	2,429	2,331	2,308
Sales for resale	91	88	73
Other	18	99	9
Total operating revenues	3,804	3,698	3,517
Operating expenses:			
Fuel for generation and purchased power	(1,413)	(1,458)	(1,356)
Maintenance and other operating expenses	(1,112)	(1,107)	(1,096)
Depreciation and amortization	(554)	(521)	(540)
Total operating expenses	(3,079)	(3,086)	(2,992)
Operating income	725	612	525
Nonoperating revenue (expenses):			
Investment income	32	22	65
Federal bond subsidies	34	33	33
Other nonoperating revenue, net	27	59	20
Debt expense, net	(340)	(317)	(267)
Total nonoperating revenue (expenses), net	(247)	(203)	(149)
Income before capital contributions and transfers	478	409	376
Capital contributions	42	32	66
Transfers to the reserve fund of the the City	(242)	(264)	(267)
Increase in net position	278	177	175
Beginning balance of net position	5,768	5,591	5,416
Cumulative effect of change in accounting for other postemployment benefits (OPEB)	(661)	—	—
Ending balance of net position	$ 5,385	5,768	5,591

Assets

Utility Plant

During fiscal years 2018 and 2017, the Power System's net utility plant increased $604 million and $451 million, respectively. Net utility plant consists of significant investments in generation, transmission, distribution, and general plant infrastructure and fuel resources less accumulated depreciation.

During fiscal year 2018, utility plant additions totaled $1,074 million. Approximately $360 million of the $1,074 million in additions were construction work in progress (CWIP) expenditures and the remaining $714 million were direct additions to utility plant categories. Major CWIP additions/expenditures during the year included $27 million for Substation Automation Systems, $25 million for Scattergood-Olympic cable, $23 million for energy storage project at Beacon Solar site, $17 million to replace Sylmar Converter Station AC filters, and $13 million to replace submarine segment of Sylmar electrode line. About $198 million in CWIP projects were transferred from CWIP to plant accounts. Transfers from CWIP included $49 million for Castaic Power Plant modernization and additions, $37 million for Beacon solar plant site development, $17 million to replace 138 KV underground transmission cable at Fairfax RS-D to the Gramercy line 1 and 2, $15 million for purchase of 6060 Sepulveda Blvd office building, and $13 million for transformer replacement program. The completion of these large projects along with current year CWIP additions, caused the balance in the CWIP account to increase by $161 million.

Direct additions are mostly related to improvements in distribution infrastructure as part of the Power System's Reliability Program (PSRP). Many of the Power System's assets were installed between 1920 and 1970. The PSRP is a program that evaluates and prioritizes which assets should be replaced first to reduce the frequency of electric service disruptions and the duration of each disruption. Approximately, $489 million and $26 million were direct additions to distribution and transmission plant accounts, respectively. Major direct additions included $131 million for replacement of deteriorated poles and crossarms, $69 million for new business line customer facilities, $55 million for design and construction of customer stations and facilities, $49 million for reliability replacement of 4.8kv and 34.5kv cables, $20 million for automatic reading meter installations, and $18 million for permanent electric service restorations.

The accumulated depreciation balance increased by a total of $438 million in fiscal year 2018, which included retirements of $2 million offset by annual depreciation of $440 million, net of depreciation charged to shared services.

For fiscal year 2017, utility plant additions totaled $930 million. Approximately $343 million of the $930 million in additions were CWIP expenditures and the remaining $587 million were direct additions to utility plant categories. Major CWIP additions/expenditures during the year included $18 million for 138 KV underground transmission cable, $22 million for Scattergood-Olympic cable, $22 million Castaic Power Plant minor additions and betterments, $20 million for Substation Automation Systems, and $16 million to replace Sylmar Converter Station AC filters. About $550 million in CWIP projects were transferred from CWIP to plant accounts. Transfers from CWIP included $243 million for the Barren Ridge to Haskell Canyon 230 KV transmission line, $69 million for infrastructure for smart grid project, $46 million for refurbishment of Unit 7 at Castaic Power Plant, $37 million for construction of new 138 KV rack positions at Receiving Station Q, $36 million for Harbor to Gramercy lines 1 and 2, and $27 million for transformer bank replacements at various receiving stations. The completion of these large projects along with current year CWIP additions caused the balance in the CWIP account to decrease to $207 million.

As part of the Power System's Reliability Program (PSRP), approximately, $454 million and $47 million were direct additions to distribution and transmission plant accounts, respectively.

The accumulated depreciation balance decreased by a net of $485 million in fiscal year 2017, which included retirements of $936 million offset by annual depreciation of $451 million. Retirements were identified during the 2016 Depreciation Study. With the adoption of the 2016 Depreciation Study on July 1, 2016, the Power System now uses the straight-line depreciation method for all assets.

Additional information regarding the Power System's utility plant assets can be found in note 3 to the accompanying financial statements.

The Power System is a vertically integrated utility, meaning it owns its own energy-generating assets, transmission system, and distribution system. The Power System has diverse power resources. The tables that follow summarize the generating resources available to the Power System as of June 30, 2018. These resources include those owned by the Power System (either solely or jointly with other utilities), as well as resources available through long-term purchase agreements. Generating station capacity is measured in megawatts (MWs).

Power System-owned Facilities

Type of fuel	Number of facilities	Number of units	Net maximum capacity (MWs)	Net dependable capacity (MWs)
Natural gas	4 [(1)]	29	3,404 [(4)]	3,319 [(4)]
Large hydro	1 [(2)]	7	1,247	1,175
Renewables	63	233 [(3)]	505 [(4)]	325 [(4)]
Subtotal	68	269	5,156	4,819
Less payable to the California Department of Water Resources	—	—	(120) [(5)]	(53) [(5)]
Total	68	269	5,036	4,766

[(1)] Consists of the four Los Angeles Basin Stations (Haynes, Valley, Harbor, and Scattergood)

(2) The Castaic Plant is undergoing modernization work scheduled to be completed by 2019.

(3) Includes 21 of the hydro units at the Los Angeles Aqueduct, Owens Valley, and Owens Gorge hydro units that are certified as renewable resources by the California Energy Commission. Also included are microturbine units at the Lopez Canyon Landfill, Department-built photovoltaic solar installations, the Pine Tree Wind Project, the Linden Wind Energy Project, and a local small hydro plant. Not included are the units that were upgraded at the Castaic Plant or the two Scattergood Generating Station gas-fueled units that partially burn digester gas.

(4) Included as renewables and excluded from natural gas are the 16 MWs of renewable energy generated at the Scattergood Generating Station by the burning of digester gas from the Hyperion Sewage Treatment Plant.

(5) Energy payable to the California Department of Water Resources for energy generated at the Castaic Plant. This amount varies weekly up to a maximum of 120 MWs.

Jointly Owned Facilities and Long Term Purchases

Type	Number of facilities [5]	Department's net maximum capacity entitlement (MWs)	Department's net dependable capacity entitlement (MWs)
Coal	1	1,202 [1]	1,202
Natural gas	1	532	480
Large hydro	1	496 [2]	302
Nuclear	1	387 [3]	380
Renewables/distributed generation (DG)	36,007 [4]	2,309	720
Total	36,011	4,926	3,084

(1) The Power System's Intermountain Power Project (IPP) entitlement is 48.6% of the maximum net plant capacity of 1,800 MWs. An additional 18.2% portion of the IPP entitlement is subject to variable recall. The IPP is owned by the Intermountain Power Agency, a subdivision of the State of Utah.

(2) The Power System's Hoover Power Plant (Hoover) contract entitlement is 496 MWs, 23.9% of the Hoover total contingent capacity. Hoover output constantly varies due to lower water levels at Lake Mead resulting from the drought conditions. As of July 2018, reduced lake levels have reduced the Department's dependable capacity to approximately 302 MWs.

(3) The Power System's Palo Verde Nuclear Generating Station entitlement is 9.7% of the maximum net plant capacity of 4,003 MWs.

(4) The Power System's contract renewable resources in-service include landfill gas units at certain landfills in the Los Angeles area; hydro unit locally; wind farms in Oregon, Washington, Utah, and Wyoming; and customer solar photovoltaic installations and DG units located in the Los Angeles region.

(5) The Power System is a member of the Southern California Public Power Authority (SCPPA), which is a California Joint Powers Agency that finances the construction or acquisition of generation, transmission, and renewable energy projects. The Power System records its transactions with SCPPA as purchased power expense as the assets purchased by SCPPA are on SCPPA's financial statements.

Other Noncurrent Assets and Deferred Outflows

During fiscal year 2018, other noncurrent assets had a net decrease of $359 million primarily due to the write off of the previously reported net postretirement asset of $661 million in conjunction with the adoption of the provisions of Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, a decrease in regulatory assets associated with pension of $133 million, a decrease in notes receivable of $116 million and decrease in underrecovered costs of $30 million, offset by an increase in regulatory assets associated with other postemployment benefits (OPEB) upon adoption of GASB 75 effective July 1, 2017, of $430 million and an increase of $143 million in regulatory assets primarily for costs related to energy efficiency programs.

Deferred outflows decreased approximately $281 million due primarily to a $387 million decrease in deferred outflows related to pension. This decrease is primarily attributable to the GASB requirement to present deferred outflows and inflows related to differences between projected and actual earnings on plan investments as either a net deferred outflow or a net deferred inflow at fiscal year end. At June 30, 2017, the cumulative unamortized balance of such differences was a net deferred outflow of $232 million. At June 30, 2018, the cumulative unamortized balance of such differences was a net deferred inflow of $50 million as a result of earnings on pension plan investments being significantly higher than projected during the net pension liability measurement period ended June 30, 2017, which is the measurement date for reporting the pension for the Power System's fiscal year 2018. The remaining decrease represents the current year's recognition of deferred outflows due to changes in assumptions and net excess of projected earnings on plan investments over actual earnings. This decrease is offset by a $95 million increase in the year-over-year contributions made after the measurement date for pension, and other postemployment benefits, an $8 million increase in gas derivative instruments due to the maturity of natural hedges, and a $4 million increase in deferred outflows on debt refunding due to amortization of gains and losses on bond refinancing.

During fiscal year 2017, other noncurrent assets had a net increase of $98 million primarily due to the reclassification of $100 million from current unrestricted cash to fund the Rate Stabilization Fund and an increase of $108 million to regulatory assets primarily for costs related to energy efficiency programs, offset by a decrease in notes receivable of $55.2 million, a decrease in regulatory assets associated with pension of $55.6 million, and decreases in underrecovered costs of $30 million.

Deferred outflows increased approximately $585 million due primarily to a $576 million increase in deferred outflows related to pension, which represents the current year's recognition of deferred outflows due to changes in assumptions and net excess of projected earnings on plan investments over actual earnings, a $21 million increase in the year-over-year pension contributions made after the measurement date, offset by a $9 million decrease in gas derivative instruments due to the maturity of natural hedges, and a $4 million decrease in deferred outflows on debt refunding due to amortization of gains and losses on bond refinancing.

Current Assets

During fiscal year 2018, current assets decreased $30 million, or 1.2%. The majority of the decrease was due to a $240 million decrease in unrestricted cash and cash equivalents due to higher expenditures and debt service costs paid and a $29 million decrease in net accounts receivable due to a $2 million year-over-year decrease in the accounts receivable gross balance, net of a $27 million increase in the Power System's allowance based on management's analysis of aged accounts. This decrease is offset by an $98 million increase in the current portion of underrecovered costs due to less consumption than forecasted causing pass-through revenue to decrease and not be adequate to cover forecasted costs, a $75 million increase in the current portion of long-term notes receivable due to higher scheduled note maturities, a $34 million increase in cash and cash equivalents, restricted due to higher principal and interest payments, a $13 million increase in cash collateral from secure lending transactions, and an aggregate increase in other current assets of $19 million.

During fiscal year 2017, current assets decreased $35 million, or 1.4%. The majority of the decrease was due to a $214 million increase in the current portion of underrecovered costs due to less consumption than forecasted causing pass-through revenue to decrease and not be adequate to cover forecasted costs; a $41 million increase in net accounts receivable due to a $75 million year-over-year increase in the accounts receivable gross balance, net of a $34 million increase in the Power System's allowance based on management's analysis of aged accounts; and a $27 million increase in the current portion of long-term notes receivable due to higher scheduled note maturities. Cash and cash equivalents, unrestricted decreased $340 million due to higher expenditures; debt service costs, and the reclassification of approximately $140 million from unrestricted to restricted cash and cash equivalents. Cash and cash equivalents, restricted increased $88 million due to higher principal and interest payments and $40 million from the sales of emission credits for which the proceeds must be used for carbon-reducing activities.

Liabilities and Net Position

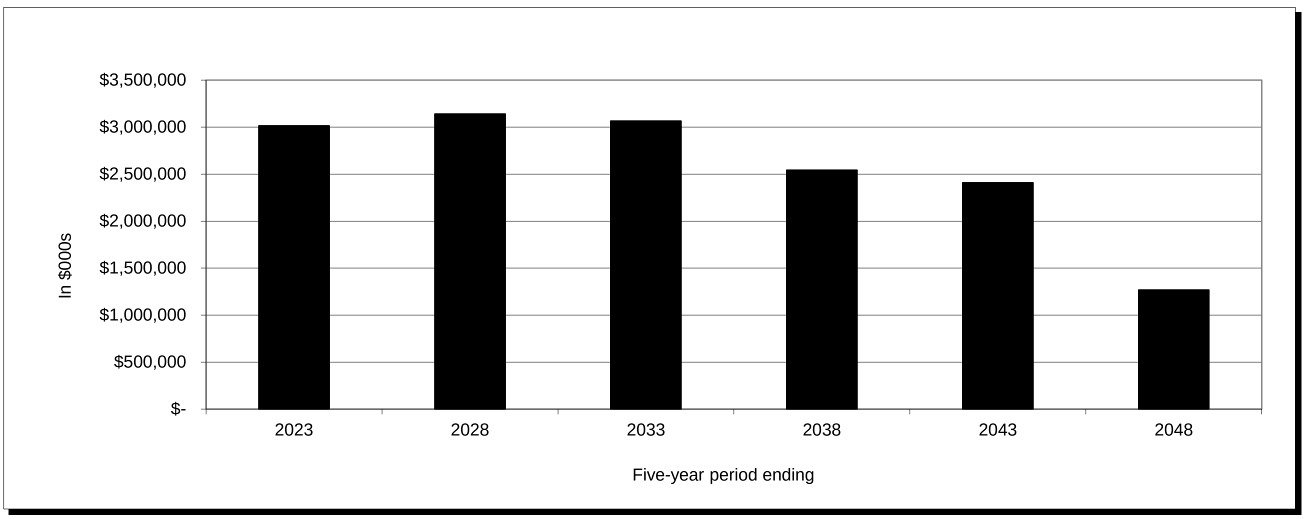
Long-Term Debt

As of June 30, 2018, the Power System's total outstanding long-term debt balance, including the current portion was approximately $9.8 billion. The increase of $253 million over the prior year's balance resulted from the sale of $729.4 million in the Power System's revenue bonds issued plus $134.9 million in issue premiums, offset by scheduled maturities of $131.8 million, defeasance of $415.7 million in the Power System's revenue bonds, and $64.0 million in net amortized premiums and discounts.

As of June 30, 2017, the Power System's total outstanding long-term debt balance, including the current portion was approximately $9.5 billion. The increase of $365 million over the prior year's balance resulted from the sale of $845.4 million in the Power System's revenue bonds issued plus $143.4 million in issue premiums, offset by scheduled maturities of $94.6 million, defeasance of $455.0 million in the Power System's revenue bonds, of which $395.6 million was defeased with new debt and the remaining defeased with operating cash, and $74.5 million in net amortized premiums and discounts.

Outstanding principal, plus scheduled interest as of June 30, 2018, is scheduled to mature as shown in the chart below:

Chart: Debt Service Requirements



In addition, the Power System had $460.6 million and $456.5 million in restricted investments available for the use of debt reduction as of June 30, 2018 and 2017, respectively.

In January 2018, S&P Global Ratings upgraded the Power System's bond rating to AA from AA- due to the Power System's ability to maintain strong financial performance. Also, in March 2018, Fitch Ratings upgraded the Power System bond rating to AA from AA- due to consistently strong financial margins and revenue resiliency. In March 2018, Moody's Investors Service affirmed the Power System's bond rating of Aa2. These ratings are due to the Power System's broad revenue stream and a competitive power supply portfolio that has historically provided competitive retail electricity rates and evident strategic focus on positioning the utility to improve system reliability while meeting state mandated greenhouse emission rules and renewable energy standards.

The Master Bond Resolution allows for parity debt to be issued as long as the Power System maintains debt service coverage of 1.25. The debt service coverage ratio is computed by taking operating revenue less operating expense excluding depreciation expense to obtain net revenue. Net revenue is then divided by the current year's debt service payment. The Power System debt service coverage for fiscal year 2017 to 2018 was 2.59.

Additional information regarding the Power System's long-term debt can be found in note 9 to the financial statements.

Pensions

The Power System's pension liability decreased $576 million from fiscal year 2017 to 2018 and increased $721 million from fiscal year 2016 to 2017 due to the pension activity below:

		Fiscal year ended		
Description		**2018**	**2017**	**2016**
Beginning net pension liability	$	1,492,508	771,122	860,748
Pension expense		165,984	214,407	(24,633)
Employer contributions		(269,172)	(248,620)	(256,288)
New net deferred inflows/outflows		(411,259)	661,546	75,365
Recognition of prior deferred inflows/outflows		(61,303)	94,053	115,930
Ending net pension liability	$	916,758	1,492,508	771,122

The net pension liability decreased due to actual earning from investments exceeding the 7.25% projected returns. Assuming actuarial projections are in the line with actual results, the pension liability increases with pension expense and decreases with employer contributions. Differences between expected and actual experience with economic and demographic factors; the effects of changes in assumptions about future economic and demographic factors; differences between actual and projected earnings and plan investments; differences between proportionate share of collective contributions and employer's actual contributions; and the effects of changes in proportion of the collective pension amounts are recorded as deferred outflows and deferred inflows and are amortized over periods ranging from five to six years in fiscal years 2018 and 2017.

OPEB

The Power System adopted the provisions of the GASB Statement No. 75, which resulted in a $661 million decrease in the net position and the recognition of a regulatory asset of $451 million, which was effective at the beginning of the period (July 1, 2017).

The Power System's net OPEB liability as a result of implementing GASB No. 75 and related activity are shown below:

Description		Healthcare	Death Benefit	Total
Beginning net OPEB liability at July 1, 2017	$	436,658	80,173	516,831
OPEB expense		41,835	6,015	47,850
Employer contributions		(63,379)	(5,581)	(68,960)
New net deferred inflows/outflows		(119,669)	638	(119,031)
Recognition of prior deferred inflows/outflows		1,861	128	1,989
Ending net OPEB liability at June 30, 2018	$	297,306	81,373	378,679

Other Long-term Liabilities and Deferred Inflows

During fiscal year 2018, other long-term liabilities had a net decrease of $187 million primarily due to the $576 million reduction of the net pension liability offset by the recognition of the $379 million of the net other postemployment benefits liabilities that resulted from the adoption of GASB No. 75, aggregate $8 million increase in derivative instruments, and $3 million increase in accrued workers' compensation claims.

Net pension liability decreased and deferred inflows increased from prior year due to actual investment returns being more than the projected 7.25% return. Derivative instruments increased due to decreases in fair value of natural gas prices in the market being less than the fixed price in the forward contract.

During fiscal year 2017, other long-term liabilities had a net increase of $716 million primarily due to the $721 million increase in the net pension liability and a $5 million increase in accrued workers' compensation claims, offset by an aggregate $10 million decrease in derivative instruments and other accrued liabilities. Deferred inflows had a net decrease of $246 million primarily due to a $172 million reduction of deferred inflows related to pension and a $74 million reduction due to the recognition of deferred revenue from the rate stabilization account.

Current Liabilities

During fiscal year 2018, current liabilities increased $80 million, or 8.2%, due to a $28 million increase in accounts payable and accrued expenses, a $22 million increase in the current portion of long-term debt, a $6 million increase in accrued interest, an $11 million increase in accrued employee expenses, and a $13 million increase in securities lending obligations by the City.

During fiscal year 2017, current liabilities increased $115 million, or 13%, of which $80.1 million was related to increased accounts payable and accrued expenses, $31.9 million was an increase in the current portion of long-term debt, $12.8 million was an increase in accrued interest, and $9.7 million was an increase in accrued employee expenses, offset by a reduction in securities lending obligations of $19.7 million.

Changes in Net Position

Operating Revenue

The Power System's rates are established by rate ordinances set by the Board of Water and Power Commissioners (the Board) based on the Board's powers and duties established in Section 676 of the City Charter. The Power System recognizes energy costs in the period incurred and accrues for estimated energy sold but not yet billed. Through a set of rate ordinances, the Power System bills its revenue through fixed and pass-through factors. As of April 15, 2016, the effective date of the 2016 Incremental Electric Rate Ordinance, all pass-through billing factors charged as part of the 2016 rates are uncapped, and a base rate revenue target (BRRTA) was established for fiscal year 2016 through fiscal year 2020 to ensure sufficient revenue to meet fixed costs while implementing an aggressive energy efficiency program. The base rate revenue target is a decoupling mechanism that separates cost recovery from the energy usage underlying the calculated overall rate. This allows the Power System to meet its financial obligations while still promoting energy conservation.

The operating revenue of the Power System is generated from wholesale and retail customers. There are four major customer categories of retail revenue. These categories include residential, commercial, industrial, and other, which includes public street lighting. Table 5 summarizes the percentage contribution of retail revenue from each customer segment in fiscal years 2018, 2017, and 2016:

Table 5 – Revenue and Percentage of Revenue by Customer Class
(Amounts in thousands)

	Fiscal year 2018		Fiscal year 2017		Fiscal year 2016	
	Revenue	Percentage	Revenue	Percentage	Revenue	Percentage
Type of retail customer:						
Residential	$ 1,265,713	34 %	$ 1,179,514	33 %	$ 1,126,690	33 %
Commercial	2,155,515	58	2,060,490	57	2,041,906	59
Industrial	273,807	8	271,109	8	266,288	8
Other, net	17,835	—	98,712	3	9,220	—
	3,712,870	100 %	3,609,825	101 %	3,444,104	100 %
Sales for resale	91,351		88,099		72,936	
Total revenue	$ 3,804,221		$ 3,697,924		$ 3,517,040	

While commercial customers consume the most electricity, residential customers represent the largest customer class. As of June 30, 2018, 2017, and 2016, the Power System had approximately 1.5 million customers. As shown in table 6, 1.4 million, or 91%, of total customers were in the residential customer class in fiscal years 2018, 2017, and 2016, respectively.

Table 6 – Number of Customers and Percentage of Customers by Customer Class

(Amounts in thousands)

		Fiscal year 2018			Fiscal year 2017			Fiscal year 2016	
		Number	Percentage		Number	Percentage		Number	Percentage
Type of retail customer:									
Residential	$	1,384	91 %	$	1,378	91 %	$	1,370	91 %
Commercial		114	8		113	8		113	8
Industrial		10	1		10	1		10	1
Other		7	—		7	—		7	—
	$	1,515	100 %	$	1,508	100 %	$	1,500	100 %

Fiscal Year 2018

Retail revenue increased $106 million due to a $76 million increase in base rate revenue from the Base Rate Revenue Target Adjustment (BRRTA). The 2016 Electric Rate Ordinance establishes the BRRTA for fiscal years 2016 through 2020. For fiscal year 2020 to 2021, and fiscal years thereafter, a BRRTA shall be established by the Board. Underrecovered costs of $312 million were recognized as revenue and will be billed during fiscal year 2019.

Fiscal Year 2017

Retail revenue increased $166 million due to a $77 million increase in base rate revenue from the BRRTA, which sets a minimum amount of revenue to be recovered from fiscal years 2016 through 2020. Additionally, $74 million in revenue was recognized from the incremental rate stabilization account as other operating income. Underrecovered costs of $213.9 million were recognized as revenue and will be billed during fiscal year 2018.

Operating Expenses

Fuel for generation and purchased power are some of the largest single operating expenses that the Power System incurs each fiscal year. Fuel for generation expense includes the cost of fuel that is used to generate energy. The majority of fuel costs include the cost of natural gas, coal, and nuclear fuel.

The table below summarizes the Power System's operating expenses during fiscal years 2018, 2017, and 2016:

Table 7 – Operating Expenses and Percentage of Expense by Type of Expense

(Amounts in thousands)

	Fiscal year 2018		Fiscal year 2017		Fiscal year 2016	
	Expense	Percentage	Expense	Percentage	Expense	Percentage
Type of expense:						
Fuel for generation	$ 268,610	9 %	$ 292,557	9 %	$ 318,749	11 %
Purchased power	1,143,535	37	1,165,303	38	1,037,471	35
Other operating expenses	799,074	26	829,347	27	787,729	26
Maintenance	313,389	10	277,771	9	307,985	10
Depreciation and amortization	554,354	18	521,220	17	540,478	18
	$ 3,078,962	100 %	$ 3,086,198	100 %	$ 2,992,412	100 %

Fiscal Year 2018

Fiscal year 2018 operating expenses were $8 million lower as compared to fiscal year 2017, driven primarily by a $24 million decrease in fuel for generation costs, a $22 million decrease in purchased power costs, a $30 million decrease in other operating expenses, offset by a $36 million increase in maintenance expenses, and a $33 million increase in depreciation and amortization expense.

The $22 million decrease in purchased power costs can be primarily attributed to reduced energy purchases from coal fired plants such as IPP. The $24 million decrease in fuel for generation costs is due to lower natural gas prices, year over year. The $30 million decrease in other operating expenses is due to lower administrative and general expenses ($30 million) due to decreased injuries and damages costs, lower customer accounting and collection expense ($10 million) due to the improvements in customer billing process and systems, offset by higher production expense ($5 million), higher distribution expenses ($3 million), and higher marketing expenses ($2 million).

The $36 million increase in maintenance expense for utility plant assets is mainly due to higher year over year maintenances costs for production plant ($11 million), distribution plant ($18 million), and transmission plant ($5 million).

The $33 million increase in depreciation and amortization expense can mainly be attributed to year-over-year increases in depreciation and amortization for regulatory assets ($14 million), distribution plant ($11 million), transmission plant ($5 million), and generation plant ($3 million).

Fiscal Year 2017

Fiscal year 2017 operating expenses were $94 million higher as compared to fiscal year 2016, driven primarily by a $128 million increase in purchased power costs, a $42 million increase in other operating expenses, offset by $26 million decrease in fuel for generation costs, a $30 million decrease in maintenance expenses, and a $19 million decrease in depreciation and amortization expense.

The $128 million increase in purchased power costs can be primarily attributed to energy purchased from two new SCCPA renewable energy projects, Springbok 1 and Springbok 2, higher market purchases, and an increase in Feed-in-Tariff (a solar incentive program) program costs. The $26 million decrease in fuel for generation costs is due to lower gas prices. The $42 million increase in other operating expenses is due to higher transmission expense ($9 million) due primarily to an increase in transmission costs at the Sylmar converter station, higher customer accounting ($6 million) due to the customer billing system, higher administrative and general expenses ($21 million) due to increased injuries and damages costs, higher distribution expenses ($5 million) due primarily to an increase in services on customer premises, higher production expense ($3 million), and higher marketing expenses ($1 million), offset by lower customer service and information expense ($3 million).

The $30 million net decrease in maintenance expense for utility plant assets is the result of ongoing replacements and retrofits, which required less maintenance.

The $19 million decrease in depreciation and amortization expense is the result of the 2016 Depreciation Study. The Power System now uses all straight-line depreciation method for assets as opposed to using the 5% sinking fund method based on estimated service lives.

Nonoperating Revenue and Expenses

Fiscal Year 2018

The major nonoperating activities of the Power System for fiscal year 2018 included the transfer of $242 million to the City General Fund, investment income of $32 million, $34 million in federal bond subsidies, $27 million in other nonoperating income, and $340 million in debt expenses.

The $10 million increase in investment income is due mainly to changes in market values of investments and income from the Intermountain Power Agreement's long-term notes.

The $32 million decrease in other nonoperating income is due mainly to a reduction of CO_2 emission allowances as the Power System did not have to sell these credits on the market in 2018.

The $23 million increase in debt expenses is mainly due to the interest expense on new bonds issued during the fiscal year net of a decrease in capitalized interest of $1 million on the year.

The $10.3 million increase in capital contributions is mainly due to amounts received from the City for Los Angeles International Airport projects ($2.7 million), FEMA for the Grants-Creek/Skirball Fires and the January 2017 Storms ($3.9 million) and Los Angeles County for various projects ($3.7 million) as compared to the prior year.

Fiscal Year 2017

The major nonoperating activities of the Power System for fiscal year 2017 included the transfer of $264 million to the City General Fund, interest income earned on investments of $21 million, $33 million in federal bond subsidies, $61 million in other nonoperating revenue, and $317 million in debt expenses.

The $44 million decrease in investment income is due mainly to changes in market values of investments and the restructuring of Intermountain Power Agreement's long-term notes.

The $39 million increase in other nonoperating income is due mainly to the net sale of CO2 emission allowances, which were recorded to other nonoperating income in the net amount.

The $49 million increase in debt expenses is mainly due to the interest expense on new bonds issued during the fiscal year net of a decrease in capitalized interest of $23 million on the year.

The $34 million decrease in capital contributions is mainly due to lower grants received from the state and federal government as compared to the prior year.

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Statements of Net Position

June 30, 2018 and 2017

(Amounts in thousands)

Assets and Deferred Outflows	2018	2017
Noncurrent assets:		
Utility plant:		
Generation	$ 5,987,567	5,793,242
Transmission	1,727,489	1,658,924
Distribution	9,012,299	8,467,796
General	1,848,581	1,757,767
Total	18,575,936	17,677,729
Accumulated depreciation	(8,242,031)	(7,803,778)
Total utility plant, net	10,333,905	9,873,951
Construction work in progress	820,472	658,992
Nuclear fuel, at amortized cost	41,528	41,465
Natural gas field, net	181,548	198,145
Total	11,377,453	10,772,553
Restricted investments	602,258	592,887
Cash and cash equivalents – restricted	318,455	312,267
Long-term notes and other receivables, net of current portion	429,764	546,160
Under recovered costs	125,649	155,628
Regulatory assets – other	898,696	755,303
Regulatory assets – pension	482,193	614,850
Regulatory assets – OPEB	430,072	—
Net postemployment asset	—	661,229
Total noncurrent assets	14,664,540	14,410,877
Current assets:		
Cash and cash equivalents – unrestricted	751,164	991,182
Cash and cash equivalents – restricted	384,648	350,256
Cash collateral received from securities lending transactions	24,114	11,397
Customer and other accounts receivable, net of $208,933 and $182,500 allowance for losses for 2018 and 2017, respectively	320,279	349,112
Current portion of long-term notes receivable	123,545	48,512
Current portion of under recovered costs	311,646	213,912
Due from Water System	9,846	8,602
Accrued unbilled revenue	197,811	194,833
Materials and fuel	176,233	170,065
Prepayments and other current assets	119,814	110,731
Total current assets	2,419,100	2,448,602
Total assets	17,083,640	16,859,479
Deferred outflows on derivative instruments	22,206	14,640
Deferred outflows on debt refunding	27,363	23,728
Deferred outflows – pension	403,310	793,045
Deferred outflows – OPEB	2,626	—
Deferred outflows – pension contributions made after measurement date	296,294	266,824
Deferred outflows – OPEB contributions made after measurement date	65,649	—
Total deferred outflows	817,448	1,098,237
Total assets and deferred outflows	$ 17,901,088	17,957,716

(Continued)

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Statements of Net Position

June 30, 2018 and 2017

(Amounts in thousands)

Net Position, Liabilities, and Deferred Inflows		2018	2017
Net position:			
Net investment in capital assets	$	1,772,899	1,432,808
Restricted:			
Debt service		643,121	600,623
Other postemployment benefits		—	661,230
Other purposes		239,575	222,220
Unrestricted		2,729,311	2,851,065
Total net position		5,384,906	5,767,946
Long-term debt, net of current portion		9,507,256	9,276,230
Other noncurrent liabilities:			
Accrued workers' compensation claims		70,474	67,410
Derivative instrument liabilities		22,204	14,640
Net OPEB liability		378,679	—
Net pension liability		916,758	1,492,508
Total other noncurrent liabilities		1,388,115	1,574,558
Current liabilities:			
Current portion of long-term debt		265,005	243,049
Accounts payable and accrued expenses		441,102	412,963
Accrued interest		188,662	182,192
Accrued employee expenses		140,932	130,063
Obligations under securities lending transactions		24,114	11,397
Total current liabilities		1,059,815	979,664
Total liabilities		11,955,186	11,830,452
Deferred inflows on debt refunding		13,233	14,144
Deferred inflows – pension		324,374	241,547
Deferred inflows – OPEB		119,669	—
Deferred inflows from regulated business activities		103,720	103,627
Total deferred inflows		560,996	359,318
Total net position, liabilities, and deferred inflows	$	17,901,088	17,957,716

See accompanying notes to financial statements.

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Statements of Revenue, Expenses, and Changes in Net Position

Years ended June 30, 2018 and 2017

(Amounts in thousands)

		2018	2017
Operating revenue:			
Residential	$	1,265,713	1,179,514
Commercial and industrial		2,429,323	2,331,599
Sales for resale		91,351	88,099
Other		50,830	133,559
Uncollectible accounts		(32,996)	(34,847)
Total operating revenue		3,804,221	3,697,924
Operating expenses:			
Fuel for generation		268,610	292,557
Purchased power		1,143,535	1,165,303
Maintenance and other operating expenses		1,112,463	1,107,118
Depreciation and amortization		554,354	521,220
Total operating expenses		3,078,962	3,086,198
Operating income		725,259	611,726
Nonoperating revenue:			
Investment income		32,135	21,848
Federal bond subsidies		33,580	33,472
Other nonoperating income		29,646	60,955
Total nonoperating revenue		95,361	116,275
Other nonoperating expenses		(2,702)	(2,235)
Total nonoperating revenue, net		92,659	114,040
Debt expenses:			
Interest on debt		348,264	326,023
Allowance for funds used during construction		(7,924)	(9,373)
Total debt expenses		340,340	316,650
Income before capital contributions and transfers		477,578	409,116
Capital contributions		42,460	32,177
Transfers to the reserve fund of the City of Los Angeles		(241,848)	(264,427)
Increase in net position		278,190	176,866
Net position:			
Beginning of year		5,767,946	5,591,080
Cumulative effect of change in accounting for postemployment benefits other than pensions, effective July 1, 2017		(661,230)	—
End of year	$	5,384,906	5,767,946

See accompanying notes to financial statements.

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Statements of Cash Flows

Years ended June 30, 2018 and 2017

(Amounts in thousands)

	2018	2017
Cash flows from operating activities:		
Cash receipts:		
Cash receipts from customers	$ 3,961,723	3,684,977
Cash collected from customers for other agency services	679,562	648,050
Cash receipts from interfund services provided	677,655	621,693
Other cash receipts	—	18,458
Cash disbursements:		
Cash payments to employees	(687,098)	(555,045)
Cash payments to suppliers	(1,931,532)	(2,061,685)
Cash payments for interfund services used	(909,214)	(807,059)
Cash payments to other agencies for fees collected	(675,764)	(648,238)
Other operating cash payments	(24,058)	—
Net cash provided by operating activities	1,091,274	901,151
Cash flows from noncapital financing activities:		
Payments to the reserve fund of the City of Los Angeles	(241,848)	(264,427)
Interest paid on noncapital revenue bonds	(5,946)	(4,697)
Net cash used in noncapital financing activities	(247,794)	(269,124)
Cash flows from capital and related financing activities:		
Additions to plant and equipment, net	(1,100,185)	(924,520)
Capital contributions	44,579	36,888
Principal payments and maturities on long-term debt	(131,756)	(153,915)
Proceeds from issuance of bonds and revenue certificates	445,126	588,322
Debt interest payments	(399,872)	(374,183)
Federal bond subsidies	33,580	33,472
Net cash used in capital and related financing activities	(1,108,528)	(793,936)
Cash flows from investing activities:		
Purchases of investment securities	(758,995)	(885,835)
Sales and maturities of investment securities	746,712	884,926
Proceeds from notes receivable	48,512	21,747
Investment income	29,381	32,018
Net cash provided by investing activities	65,610	52,856
Net decrease in cash and cash equivalents	(199,438)	(109,053)
Cash and cash equivalents:		
Beginning of year	1,653,705	1,762,758
End of year	$ 1,454,267	1,653,705

(Continued)

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Statements of Cash Flows

Years ended June 30, 2018 and 2017

(Amounts in thousands)

		2018	**2017**
Reconciliation of operating income to net cash provided by operating activities:			
Operating income	$	725,259	611,726
Adjustments to reconcile operating income to net cash provided by operating activities:			
Depreciation and amortization		554,354	521,220
Depletion expense		16,618	15,617
Amortization of nuclear fuel		13,185	13,610
Provision for losses on customer and other accounts receivables		32,996	34,847
Changes in assets and liabilities:			
Customer and other accounts receivable		(7,768)	(81,393)
Accrued unbilled revenue		(2,978)	1,699
Underrecovered costs		29,979	29,979
Current portion of underrecovered costs		(97,734)	(213,912)
Materials and fuel		(6,168)	48,489
Regulatory assets		(511,058)	(108,965)
Due from Water System		(1,244)	(684)
Deferred outflows		291,989	(597,275)
Accounts payable and accrued expenses		17,444	70,102
Overrecovered energy cost		—	(44)
Net pension liability		(575,750)	721,387
Net OPEB liability		378,679	—
Deferred inflows		202,497	(179,686)
Net other postemployment benefit asset		—	13,259
Prepayments and other		30,974	1,175
Net cash provided by operating activities	$	1,091,274	901,151
Supplemental disclosures of noncash capital and relating financing activities:			
During the year ended June 30, 2018, the Power System issued capital bonds to refund previously issued debt. The $418.5 million of proceeds were deposited immediately into an irrevocable trust for the defeasance of $415.7 million of debt. The net loss on refunding, after the write-off of previously recorded unamortized premiums, in the amount of $7.7 million, will be amortized over the debt repayment period and recorded as a deferred outflow.	$	—	—
During the year ended June 30, 2017, the Power System issued capital bonds to refund previously issued debt. The $399.7 million of proceeds were deposited immediately into an irrevocable trust for the defeasance of $395.6 million of debt. The net gain on refunding, after the write-off of previously recorded unamortized premiums, in the amount of $7.6 million, will be amortized over the debt repayment period and recorded as a deferred inflow.		—	—
Accounts payable related to capital expenditures		10,695	10,652

See accompanying notes to financial statements.

(1) Summary of Significant Accounting Policies

The Department of Water and Power (the Department) exists as a separate department of the City of Los Angeles (the City) under and by virtue of the City Charter enacted in 1925, and as revised effective July 2000. The Department's Power Revenue Fund (the Power System) is responsible for the generation, transmission, and distribution of electric power for sale in the City. The Power System is operated as an enterprise fund of the City.

(a) Method of Accounting

The accounting records of the Power System are maintained in accordance with U.S. generally accepted accounting principles (GAAP) for state and local governmental entities. The financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting. The Power System is accounted for as an enterprise fund and applies all applicable Governmental Accounting Standards Board (GASB) pronouncements in its accounting and reporting.

The financial statements of the Power System are intended to present the net position, and the changes in net position and cash flows, of only that portion of the business-type activities and each major fund of the City that is attributable to the transactions of the Power System. They do not purport to, and do not, present fairly the financial position of the City as of June 30, 2018 and 2017, the changes in its financial position, or, where applicable, its cash flows for the years then ended, in conformity with GAAP.

The Power System's rates are determined by the Board of Water and Power Commissioners (the Board) and are subject to review and approval by the Los Angeles City Council. As a regulated enterprise, the Power System follows the regulatory accounting criteria set forth in GASB 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 reported in the financial statements. Such effects primarily concern the time at which various items enter into the determination of changes in net position. Accordingly, the Power System records various regulatory assets and liabilities to reflect the Board's actions and by deferring expenses and revenue that are recoverable or payable from rates provided in the electric rate ordinances. Regulatory liabilities comprise overrecovered costs, and deferred inflows and regulatory assets comprise regulatory assets and underrecovered costs in the statement of net position. Management believes that the Power System meets the criteria for continued application of GASB Statement No. 62, but will continue to evaluate its applicability based on changes in the regulatory and competitive environment. See note 6.

(b) Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

 (Continued)

(c) Utility Plant

The costs of additions to utility plant and replacements of retired units of property are capitalized. Costs include labor, materials, an allowance for funds used during construction, and allocated indirect charges, such as engineering, supervision, transportation and construction equipment, retirement plan contributions, healthcare costs, and certain administrative and general expenses. The costs of maintenance, repairs, and minor replacements are charged to the appropriate operations and maintenance expense accounts.

(d) Intangibles

The Power System follows GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets*, which requires that an intangible asset be recognized in the statement of net position only if it is considered identifiable. Additionally, it establishes a specified-conditions approach to recognize intangible assets that are internally generated. Effectively, outlays associated with the development of such assets are not capitalized until certain criteria are met. Outlays incurred prior to meeting these criteria are expensed as incurred. Intangible assets consist of land easements, water rights, and computer software and are included in general utility plant on the statements of net position.

(e) Impairment of Long-Lived Assets

The Power System follows GASB Statement No. 42, *Accounting and Financial Reporting for Impairment of Capital Assets and for Insurance Recoveries*. Governments are required to evaluate prominent events or changes in circumstances affecting capital assets to determine whether impairment of a capital asset has occurred. A capital asset is considered impaired when its service utility has declined significantly and unexpectedly. Under GASB Statement No. 42, impaired capital assets that will no longer be used by the government should be reported at the lower of carrying value or fair value. Impairment losses on capital assets that will continue to be used by the government should be measured using the method that best reflects the cause of the diminished service utility of the capital asset.

(f) Depreciation and Amortization

Beginning in fiscal year 2017, depreciation expense is computed using the straight-line method for all assets. Depreciation rates are in accordance with the Power System's 2016 Depreciation Study.

The Power System uses the composite method of depreciation and, therefore, groups assets into composite groups for purposes of calculating depreciation expense. Estimated service lives range from 5 to 75 years. Amortization expense for computer software is computed using the straight-line method over 5 to 15 years. Depreciation and amortization expense as a percentage of average depreciable utility plant in service was 2.9% and 2.8% for fiscal years ended 2018 and 2017, respectively. Amortization periods of regulatory assets are discussed in note 6.

(g) Nuclear Decommissioning

The Power System owns a 5.70% direct ownership interest in the Palo Verde Nuclear Generating Station (PVNGS). In addition, through its participation in the Southern California Public Power Authority (SCPPA), the Power System is party to a contract for an additional 3.95% of the output of PVNGS.

Nuclear decommissioning costs associated with the Power System's output entitlement are included in purchased power expense. See note 5.

Decommissioning of PVNGS is expected to commence subsequent to the year 2044, since the Nuclear Regulatory Commission (the NRC) approved a request for a 30-year license extension in April 2011. As of April 28, 2014, all of the owners of PVNGS have executed the amendment to the participation agreement to extend the term of the agreement to cover the license extension of PVNGS. The decommissioning estimate is based on an updated site-specific study prepared by an independent consultant in 2016, escalated to year 2017 dollars. As of June 30, 2018 and 2017, the Power System has recorded $154 million and $153 million, respectively, to accumulated depreciation – generation to provide for the decommissioning liability. See note 3.

Prior to December 1999, the Power System reserved $70 million in accordance with the PVNGS participation agreement and the NRC requirements. During fiscal year 2000, the Power System suspended contributing additional amounts to the reserve funds, as management believes that contributions made, combined with reinvested earnings, will be sufficient to fully fund the Power System's share of decommissioning costs. The Power System will continue to reinvest its investment income into the decommissioning reserves. The balance in the decommissioning funds increased in fiscal year 2018 by $0.2 million, after increasing by $0.4 million in fiscal year 2017. The fair value of the decommissioning funds, which is included in restricted investments, totaled $134.0 million and $133.8 million as of June 30, 2018 and 2017, respectively. The Power System's current accounting policy recognizes any realized and unrealized investment earnings from nuclear decommissioning reserves as addition to accumulated depreciation. See note 7.

(h) Nuclear Fuel

Nuclear fuel is amortized and charged to fuel for generation on the basis of actual thermal energy produced relative to total thermal energy expected to be produced over the life of the fuel. Under the provisions of the Nuclear Waste Policy Act of 1982, the federal government assesses each utility with nuclear operations, including the Power System, $1 per megawatt hour of nuclear generation. The Power System includes this charge as a current year expense in fuel for generation.

(i) Natural Gas Field

In July 2005, the Power System acquired approximately a 74.5% ownership interest in gas properties located in Pinedale, Wyoming. The Power System uses the successful efforts method of accounting for its investment in gas-producing properties. Costs to acquire the mineral interest in gas-producing properties, to drill and equip exploratory wells that find proven reserves, and to drill and equip development wells are capitalized. Costs to drill exploratory wells that do not find proven reserves are expensed. Capitalized costs of gas-producing properties are depleted by the unit-of-production method based on the estimated future production of the proven wells.

Depletion expense related to the gas field is recorded as a component of fuel for generation expense. During fiscal years 2018 and 2017, the Power System recorded $16.6 million and $15.6 million of depletion expense, respectively.

(j) Cash and Cash Equivalents

As provided for by the State of California Government Code, the Power System's cash is deposited with the City Treasurer in the City's general investment pool for the purpose of maximizing interest earnings through pooled investment activities. Cash and cash equivalents in the City's general investment pool are reported at fair value on a recurring basis and changes in unrealized gains and losses are recorded in the statements of revenue, expenses, and changes in net position. Interest earned on such pooled investments is allocated to the participating funds based on each fund's average daily cash balance during the allocation period. The City Treasurer invests available funds of the City and its independent operating departments on a combined basis. The Power System classifies all cash and cash equivalents that are restricted either by creditors, the Board, or by law as restricted cash and cash equivalents in the statements of net position. The Power System considers its portion of pooled investments in the City's pool to be unrestricted cash and cash equivalents and the unspent construction funds as long-term restricted cash and cash equivalents.

At June 30, 2018 and 2017, restricted cash and cash equivalents include the following (amounts in thousands):

		June 30	
		2018	**2017**
Bond redemption and interest funds	$	345,602	311,209
Other restricted funds		39,046	39,047
Cash and cash equivalents – current portion		384,648	350,256
Self-insurance funds		192,886	180,575
Rate Stabilization fund		100,000	100,000
Bond redemption funds		25,569	15,123
Construction funds		—	16,569
Cash and cash equivalents – noncurrent		318,455	312,267
Total restricted cash and cash equivalents	$	703,103	662,523

(k) Customer and Other Accounts Receivable and Allowance for Doubtful Accounts

The Power System's accounts receivables consist of customer and other receivables. The receivables are reported net of allowance for losses. Customer account receivables result from the sale of energy to city residents. Other receivables consist of billings to customers, federal, state, and local governments for work performed to improve or enhance energy distribution, energy sales to other utilities, and other miscellaneous receivables.

Power System's residential customers are billed bi-monthly, and customers on monthly billings include commercial, governmental, and industrial. The Power System records an estimate for uncollectible accounts for its receivables related to electric customer accounts and other nonelectric customer billings based on inactive accounts from Customer Care Billing System and historical experience with collections based on aging reports. These estimates are reviewed and adjusted annually.

The Power System records bad debt for its estimated uncollectible accounts related to electric customer accounts as a reduction in the Power Operating Revenue. The Power System records its estimated uncollectible accounts related to non-electric customer billings as a reduction to related operating revenue in the Power System.

At June 30, 2018 and 2017, customer and other accounts receivable include the following (amounts in thousands):

		June 30	
		2018	**2017**
Customer accounts receivable	$	476,694	424,639
Allowance for losses		(198,233)	(175,000)
Customer accounts receivable		278,461	249,639
Customer accounts receivable, other		52,518	106,973
Allowance for losses, other		(10,700)	(7,500)
Customer accounts receivable other		41,818	99,473
Total customer accounts receivable	$	320,279	349,112

(l) Materials and Fuel

Materials and supplies are recorded at average cost. Fuel is recorded at lower of cost or market on an average-cost basis.

(m) Accrued Unbilled Revenue

Accrued unbilled revenue is the receivable for estimated energy sales during the period for which service has been provided but the customer has not yet been billed.

(n) Investments

The Power System follows GASB Statement No. 72, *Fair Value Measurement and Application*, which addresses accounting and fair value reporting issues related to fair value measurements by clarifying the definition of fair value, establishing general principles for measuring fair value, providing additional fair value application guidance, and enhancing disclosures about fair value measurements. This statement established a three-level hierarchy of inputs to valuation techniques used to measure fair value. Restricted investments include primarily commercial paper, U.S. government and governmental agency securities, and corporate bonds. Investments are reported at fair value on a recurring basis, and changes in unrealized gains and losses are recorded in the statements of revenue, expenses, and changes in net position.

(In thousands)

(o) Accrued Employee Expenses

Accrued employee expenses include accrued payroll and an estimated liability for vacation leave, sick leave, and compensatory time, which are accrued when employees earn the rights to the benefits. Below is a schedule of accrued employee expenses as of June 30, 2018 and 2017:

		June 30	
		2018	**2017**
Type of expenses:			
Accrued payroll	$	54,895	48,563
Accrued vacation		52,224	50,001
Accrued sick leave		13,583	12,848
Compensatory time		20,230	18,651
Total	$	140,932	130,063

(p) Debt Expenses

Debt premiums and discounts are capitalized and amortized to interest expense using the effective-interest method over the lives of the related debt issues. Gains and losses on refundings related to bonds redeemed by proceeds from the issuance of new bonds are amortized to interest expense using the effective-interest method over the shorter of the life of the new bonds or the remaining term of the bonds refunded. Debt issuance costs are expensed in the year debt is issued.

(q) Accrued Workers' Compensation Claims

Liabilities for unpaid workers' compensation claims are recorded at their net present value. See note 12.

(r) Customer Deposits

Customer deposits represent deposits collected from customers upon opening of new accounts. These deposits are obtained when the customer does not have a previously established credit history with the Power System. Original deposits plus interest are paid to the customer once a satisfactory payment history is maintained, generally after one to three years.

The Department's Water Revenue Fund (the Water System) is responsible for collection, maintenance, and refunding of these deposits for all the Department's customers, including those of the Power System. As such, the Water System's statements of net position include a deposit liability of $205 million and $189 million as of June 30, 2018 and 2017, respectively, for all customer deposits collected. In the event that the Water System defaults on refunds of such deposits, the Power System would be required to pay amounts it owes its customers.

(s) Capital Contributions

Capital contributions and other grants received by the Power System for constructing utility plant and other activities are recognized when all applicable eligibility requirements, including time requirements, are met.

(t) Allowance for Funds Used during Construction (AFUDC)

An AFUDC charge represents the cost of borrowed funds used for the construction of utility plant. Capitalized AFUDC is included as part of the cost of utility plant and as a reduction of interest expense. As of June 30, 2018 and 2017, the average AFUDC rates were 3.71% and 3.50%, respectively.

(u) Use of Restricted and Unrestrictive Resources

The Power System's policy is to use unrestricted resources prior to restricted resources to meet expenses to the extent that it is prudent from an operational perspective. Otherwise, restricted resources will be utilized to meet intended obligations.

(v) Pensions

Eligible employees of the Power System are members of the Water and Power Employees' Retirement Plan (the Plan), which is a single-employer defined-benefit pension plan. The Power System's policy is to fund all the required actuarially determined contributions; such costs to be funded are determined annually as of July 1 by an actuary utilized by the Plan. The assets of the Plan are accumulated and reported at fair value in a special trust fund of the City and, therefore, are not reported in the accompanying financial statements.

The Power System recognizes a net pension liability, which represents the Power System's proportionate share of the excess of the total pension liability over the fiduciary net position of the pension plan as reflected in the financial statements of the Plan. The net pension liability is measured as of the Power System's prior fiscal year-end. Changes in the net pension liability are recorded, in the period incurred, as pension expense or as deferred inflows of resources or deferred outflows of resources depending on the nature of the change. The changes in net pension liability that are recorded as deferred inflows of resources or deferred outflows of resources (that arise from changes in actuarial assumptions or other inputs and differences between expected or actual experience) are amortized over the weighted average remaining service life of all participants in the respective pension plan and are recorded as a component of pension expense beginning with the period in which they are incurred. Projected earnings on pension investments are recognized as a component of pension expense. Differences between projected and actual investment earnings are reported as deferred inflows of resources or deferred outflows of resources and amortized as a component of pension expense on a closed basis over a five-year period beginning with the period in which the difference occurred. Each subsequent year will incorporate an additional closed basis five-year period of recognition. Contributions made after the measurement date are recorded as deferred outflows and a reduction to the pension regulatory asset.

For purposes of measuring the net pension liability and deferred outflows/inflows or resources relating to pensions and pension expense, information about the fiduciary net position of the Power System's pension plan and additions to/deductions from the plan's fiduciary net position has been determined on the same basis as they are reported by the Plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit's terms.

(w) Other Retirement Plan Benefits

Eligible employees of the Power System are members of the Water and Power Employees' Retirement Plan (the Plan), which comprises a single-employer defined-benefit plan and a system of benefits. In addition to pension benefits, retirees can also receive Other Postemployment benefits (OPEB), mainly, healthcare and death benefits. The level of benefits is determined based on their years of civil service, age, and which pension tier they belong to. Active employees who qualify for disability can receive permanent disability benefits in accordance with the plan provisions up until retirement and temporary disability for up to 24 months.

The Power System's policy is to fund all the required actuarially determined contributions; such costs to be funded are determined annually as of July 1 by an actuary utilized by the Plan. The assets of the Plan are accumulated and reported at fair value in a special trust fund of the City and, therefore, are not reported in the accompanying financial statements.

Beginning with the year ended June 30, 2018, the Power System recognizes a net OPEB liability, which represents the Power System's proportionate share of the excess of the total OPEB liability over the fiduciary net position of the Plan as reflected in the financial statements of the Plan. The net OPEB liability is measured as of the Power System's prior fiscal year-end. Changes in the net OPEB liability are recorded, in the period incurred, as OPEB expense or as deferred inflows of resources or deferred outflows of resources depending on the nature of the change. The changes in net OPEB liability that are recorded as deferred inflows of resources or deferred outflows of resources (that arise from changes in actuarial assumptions or other inputs and differences between expected or actual experience) are amortized over the weighted average remaining service life of all participants in the respective OPEB plan and are recorded as a component of OPEB expense beginning with the period in which they are incurred. Projected earnings on pension investments are recognized as a component of OPEB expense. Differences between projected and actual investment earnings on Plan investments are reported as deferred inflows of resources or deferred outflows of resources and amortized as a component of OPEB expense on a closed basis over a five-year period beginning with the period in which the difference occurred. Each subsequent year will incorporate an additional closed basis five-year period of recognition. Contributions made after the measurement date are recorded as deferred outflows and a reduction to the OPEB regulatory asset.

For purposes of measuring the net OPEB liability and deferred outflows/inflows or resources relating to OPEB and OPEB expense, information about the fiduciary net position of the Plan and additions to/deductions from the plan's fiduciary net position have been determined on the same basis as they are reported by the Plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms.

(Continued)

(x) Reclassifications

Certain reclassifications have been made to 2017 amounts to conform to the 2018 financial statement presentation. There was no impact on the previously reported change in net position of the Power System.

(2) Recent Accounting Pronouncements

(a) GASB Statement No. 75

In June 2015, the GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. This statement replaces the requirements of GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, *as amended*, and establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expenses. The Power System adopted the provisions of Statement No. 75 beginning fiscal year 2018 as it was not practical to adopt the Statement for the year ended June 30, 2017 as information was not available. Accordingly, the cumulative effect of the impact on net position as of July 1, 2017 is as follows (amounts in thousands):

Effect of change in accounting for postemployment benefits:		
Retiree Healthcare liability, as of July 1, 2017	$	(436,658)
Death Benefit liability, as of July 1, 2017		(80,173)
Deferred outflows – contributions after the measurement date at July 1, 2017		65,649
Reversal of previously reported OPEB asset		(661,230)
Recognition of regulatory asset related to OPEB at July 1, 2017		451,182
Cumulative effect of change in accounting for OPEB	$	(661,230)

(b) GASB Statement No. 81

In March 2016, the GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*, effective for the Power System's fiscal year beginning July 1, 2017. The purpose of this statement is to improve accounting and financial reporting by establishing recognition and measurement requirements for irrevocable split-interest agreements. The Power System adopted this statement in the current year and there was no impact on its financial statements.

(c) GASB Statement No. 82

In March 2016, the GASB issued Statement No. 82, *Pension Issues – an amendment of GASB Statements No. 67, No. 68, and No. 73*. The objective of this statement is to address certain issues that have been raised with respect to Statement No. 67, *Financial Reporting for Pension Plans*, and Statement 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*. Specifically, this statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an actuarial standard of practice for financial reporting purposes, and (3) the classification of payments by employers to satisfy employee (plan member) contribution requirements. There was no impact on the Power System's financial statements as a result of the Power System's implementation of GASB Statement No. 82.

(d) GASB Statement No. 83

In November 2016, the GASB issued Statement No. 83, *Accounting and Financial Reporting for Certain Asset Retirement Obligations*. This statement addresses accounting and financial reporting for certain asset retirement obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible 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 of this statement. This statement is effective for the Power System for the year ending June 30, 2019. The Power System is currently evaluating the effect this statement will have on the financial statements.

(e) GASB Statement No. 84

In January 2017, the GASB issued Statement No. 84, *Fiduciary Activities*, effective for the Power System's fiscal year beginning July 1, 2019. The purpose of this statement is to enhance consistency in reporting by identifying fiduciary activities and how they should be reported. Management has not yet determined the impact of GASB Statement No. 84 on the Power System's financial statements.

(f) GASB Statement No. 85

In March 2017, the GASB issued Statement No. 85, *Omnibus 2017*, effective for the Power System's fiscal year beginning July 1, 2017. The purpose of this statement is to enhance consistency in accounting and financial reporting in a variety of areas including but not limited to component unit blending, fair value measurement and application, OPEB, real estate held, and money market investments. Adoption of this standard did not result in material adjustments to the financial statements.

(g) GASB Statement No. 86

In May 2017, the GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*, effective for the Power System's fiscal year beginning July 1, 2017. The purpose of this statement is to enhance consistency in accounting and financial reporting by providing guidelines for defeasance of debt. The Power System adopted this statement in the current year and there was no impact on its financial statements as of and for the years ended June 30, 2018 and 2017.

(h) GASB Statement No. 87

In June 2017, the GASB issued Statement No. 87, *Leases*, effective for the Power System's fiscal year beginning July 1, 2020. The purpose of this statement is to enhance consistency in accounting and financial reporting by providing a methodology for identifying and reporting lease arrangements and obligations. Management has not yet determined the impact of GASB Statement No. 87 on the Power System's financial statements.

(Continued)

(i) GASB Statement No. 88

In March 2018, the GASB issued Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placement,* effective for the Power System's fiscal year beginning after July 1, 2019. The purpose of this statement is to improve the information that is disclosed in the notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt.

(j) GASB Statement No. 89

In June 2018, the GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period,* effective for the Power System's fiscal year beginning July 1, 2020. The objectives of this statement are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing and (2) to simplify accounting for interest cost incurred before the end of a construction period.

(3) Utility Plant

The Power System had the following activities in utility plant during fiscal year 2018 (amounts in thousands):

	Balance June 30, 2017	Additions	Retirements and disposals	Transfers	Balance June 30, 2018
Nondepreciable utility plant:					
Land and land rights	$ 201,904	19,815	—	—	221,719
Construction work in progress	658,992	359,581	—	(198,101)	820,472
Nuclear fuel	41,465	13,250	(13,187)	—	41,528
Natural gas field	198,145	21	(16,618)	—	181,548
Total nondepreciable utility plant	1,100,506	392,667	(29,805)	(198,101)	1,265,267
Depreciable utility plant:					
Generation	5,721,886	112,237	(1,175)	83,262	5,916,210
Transmission	1,576,865	25,580	(7)	42,760	1,645,198
Distribution	8,425,080	488,779	(7)	55,732	8,969,584
General	1,751,994	55,225	(341)	16,347	1,823,225
Total depreciable utility plant	17,475,825	681,821	(1,530)	198,101	18,354,217
Accumulated depreciation:					
Generation	(2,457,196)	(128,687)	1,175	—	(2,584,708)
Transmission	(528,663)	(32,757)	7	—	(561,413)
Distribution	(3,854,509)	(224,974)	7	—	(4,079,476)
General	(963,410)	(53,365)	341	—	(1,016,434)
Total accumulated depreciation	(7,803,778)	(439,783)	1,530	—	(8,242,031)
Total utility plant, net	$ 10,772,553	634,705	(29,805)	—	11,377,453

The Power System had the following activities in utility plant during fiscal year 2017 (amounts in thousands):

		Balance, June 30, 2016	Additions	Retirements and disposals	Transfers	Balance, June 30, 2017
Nondepreciable utility plant:						
Land and land rights	$	196,953	4,951	—	—	201,904
Construction work in progress		866,434	342,606	—	(550,048)	658,992
Nuclear fuel		39,948	15,127	(13,610)	—	41,465
Natural gas field		213,691	71	(15,617)	—	198,145
Total nondepreciable utility plant		1,317,026	362,755	(29,227)	(550,048)	1,100,506
Depreciable utility plant:						
Generation		6,515,789	40,319	(892,402)	58,180	5,721,886
Transmission		1,220,320	46,704	(2,291)	312,132	1,576,865
Distribution		7,819,097	453,633	(7)	152,357	8,425,080
General		1,739,629	26,425	(41,439)	27,379	1,751,994
Total depreciable utility plant		17,294,835	567,081	(936,139)	550,048	17,475,825
Accumulated depreciation:						
Generation		(3,197,811)	(151,787)	892,402	—	(2,457,196)
Transmission		(502,987)	(27,967)	2,291	—	(528,663)
Distribution		(3,636,511)	(218,005)	7	—	(3,854,509)
General		(952,003)	(52,846)	41,439	—	(963,410)
Total accumulated depreciation		(8,289,312)	(450,605)	936,139	—	(7,803,778)
Total utility plant, net	$	10,322,549	479,231	(29,227)	—	10,772,553

Depreciation and amortization expense during fiscal years 2018 and 2017 was $554.3 million and $521.2 million, respectively. Depreciation and amortization expense on the statements of cash flows includes amortization expense on software and regulatory assets, which is not included in additions to accumulated depreciation above. Additions to accumulated depreciation above also include increases in fair value related to the PVNGS decommissioning fund, which are not included in depreciation and amortization expense on the statements of cash flows. See note 1(g).

Land and land rights are included in the balance sheet as utility plant assets in their functional category.

(4) Jointly Owned Utility Plant

The Power System has undivided direct interests in several electric generating stations and transmission systems that are jointly owned with other utilities, as defined in GASB Statement No. 14, *The Reporting Entity*. As of June 30, 2018 and 2017, utility plant includes the following amounts related to the Power System's ownership interest in each jointly owned utility plant (amounts in thousands, except as indicated):

	Ownership interest	Share of capacity (MWs)	Utility plant in service June 30, 2018 Cost	Utility plant in service June 30, 2018 Accumulated depreciation	Utility plant in service June 30, 2017 Cost	Utility plant in service June 30, 2017 Accumulated depreciation
Palo Verde Nuclear Generating Station	5.7%	224	$ 598,434	412,775	592,194	404,669
Mohave Generating Station	10.0	—	3,408	229	3,408	229
Pacific Intertie DC Transmission Line	40.0	1,240	190,174	81,045	189,549	76,667
Other transmission systems	—	Various	112,929	68,718	109,885	65,464
			$ 904,945	562,767	895,036	547,029

The Power System will incur certain minimal operating costs related to the jointly owned facilities, regardless of the amount or its ability to take delivery of its share of energy generated. The Power System's proportionate share of the operating costs of the joint plants is included in the corresponding categories of operating expenses.

(5) Purchased Power Commitments

As of June 30, 2018, the Power System has entered into a number of energy and transmission service contracts that, regardless of the energy they take, they are obligated to pay the following minimum costs:

	The Power System's interest in agency's share						
	Agency	Agency share	Interest	Capacity	Principal payments	Interest payments	Total
Intermountain Power Project	IPA	100%	65%	1,170	$ 396,975	5,126	402,101
Palo Verde Nuclear Generating Station	SCPPA	6.0	67.0	159	—	—	—
Mead- Adelanto Transmission Project	SCPPA	68.0	48.9	539	45,562	10,555	56,117
Mead-Phoenix Transmission Project	SCPPA	17.8–22.4	50.4	647	25,517	7,510	33,027
Southern Transmission Project	SCPPA	100.0	59.5	1,429	289,576	59,597	349,173
Milford Wind I	SCPPA	100.0	92.5	185	164,266	58,597	222,863
Windy Point	SCPPA	100.0	100.0	262*	386,195	137,866	524,061
Linden Wind Energy Project	SCPPA	100.0	100.0	50*	114,040	64,103	178,143
Milford Wind II	SCPPA	100.0	100.0	102*	125,505	51,325	176,830
Apex Power Project	SCPPA	100.0	100.0	520	290,715	163,971	454,686
Total					$ 1,838,351	558,650	2,397,001

Power System will receive 100% of the energy, unless City of Glendale exercises its option to repurchase any of its contract output entitlement share.

These long-term commitments extend through 2044 when the debt is repaid.

IPA – The Intermountain Power Agency (IPA) is an agency of the State of Utah established to own, acquire, construct, operate, maintain, and repair the Intermountain Power Project (IPP). The Power System serves as the project manager and operating agent of IPP.

SCPPA – The Southern California Public Power Authority (SCPPA) is a California joint powers agency that finances the construction or acquisition of generation, transmission, and renewable energy projects. The Power System is a member of SCPPA.

Unlike joint utility plant disclosed in note 4, the Power System does not have ownership of any assets related to these service contracts. As costs are paid each year, they are recorded as purchase power expense in the statements of revenue, expenses, and changes in net position.

In addition to commitments noted above for debt service, the Power System is required to pay an average annual fixed charge of approximately $686 million during each of the next five years and for operating and maintenance costs related to actual deliveries of energy under these agreements The Power System made total payments under these agreements of approximately $905 million and $894 million in fiscal years 2018 and 2017, respectively, and they are recorded as purchased power expense in the statements of revenue, expenses, and changes in net position. These agreements are scheduled to expire from 2027 to 2044.

The Power System is reimbursed for services provided to IPP under the IPP project manager and operating agent agreements totaling $29 million and $30 million in fiscal years 2018 and 2017, respectively. These fees are recorded as a reduction to maintenance and other expense on the accompanying statements of revenue, expenses and net position.

(a) Long-Term Notes Receivable

Under the terms of its purchase power agreement with IPA, the Power System is charged for its output entitlements based on its share of IPA’s costs, including debt service. During fiscal year 2000, the Power System restructured a portion of this obligation by transferring $1 billion to IPA in exchange for long-term notes receivable. The funds transferred were obtained from the debt reduction funds and through the issuance of new variable rate debentures. See note 7. IPA used the proceeds from these transactions to defease and tender bonds with par values of approximately $618 million and $611 million, respectively.

On September 7, 2000, the Power System paid $187 million to IPA in exchange for additional long-term notes receivable. IPA used the proceeds to defease bonds with a face value of $198 million.

On July 20, 2005, the Power System paid $97 million to IPA in exchange for additional long-term notes receivable. IPA used the proceeds to defease bonds with a face value of $92 million.

(In thousands)

The IPA notes are subordinate to all of IPA's publicly held debt obligations. The Power System's future payments to IPA will be partially offset by interest payments and principal maturities from the subordinated notes receivable. The net IPA notes receivable balance totaled $553 million and $595 million as of June 30, 2018 and 2017, respectively.

The IPA notes pay interest and principal monthly and mature on July 1, 2023. The interest rates range from 3.95% to 5.71%, subject to adjustments related to IPA bond refundings.

Scheduled annual principal maturities are as follows:

		Amount
Year:		
2019	$	123,545
2020		159,309
2021		155,920
2022		68,365
2023		74,425
2024		6,308
		587,872
Unamortized discount		(34,558)
		553,314
Less current portion		(123,545)
Noncurrent portion	$	429,769

(b) Energy Entitlement

The Power System has a contract through September 2067 with the U.S. Department of Energy for the purchase of available energy generated at the Hoover Powerplant. the Power System's contractual share of contingent capacity at Hoover is 491 MW (maximum-rated capability). The cost of power (approximately 455 MW of capacity and 599,000 MWH of energy) purchased under this contract, including the Lower Colorado River Basin Development Fund Contribution Charge, was approximately $16 million and $15 million as of June 30, 2018 and 2017, respectively. On December 20, 2011, President Barack Obama signed H.R. 470, the Hoover Power Allocation Act of 2011, into law. The legislation reallocated, for 50 more years, power from the Hoover Powerplant to existing contractors while creating an additional pool of 5% power for new entrants.

The Power System has entered into contracts with SCPPA to purchase available renewable energy generated at various renewable energy project sites.

(Continued)

Unlike service contracts noted earlier in note 5, the Power System only pays costs related to these contracts if energy is delivered. As of June 30, 2018, the Power System energy entitlement contracts with SCPPA allowed for additional capacity with the associated cost over the life of the contract as follows (dollar amounts in millions):

			The Power System's interest in agency's share			
	Agency	Agency share	Interest	Capacity (MWs)	Cost of power purchased	Contract expiration
Pebble Springs Wind Project	SCPPA	100.0	69.6	68.7	$ 10.4	2025
Don A Campbell I	SCPPA	100.0	84.6	13.7	14.2	2033
Don A Campbell II	SCPPA	100.0	100.0	16.2	13.2	2035
Copper Mountain Solar 3	SCPPA	100.0	84.0	210.0	49.6	2040
Heber 1 Geothermal	SCPPA	100.0	66.7	41.7	17.3	2025
Springbok 1 Wind Farm	SCPPA	100.0	100.0	105.0	20.4	2040
Springbok 2 Wind Farm	SCPPA	100.0	100.0	155.0	24.0	2045
Ormat Northern Nevada	SCPPA	100.0	100.0	150.0	12.4	2042
Ormesa	SCPPA	100.0	85.7	30.0	11.7	2042
ARP-Loyalton Biomass	SCPPA	66.6	74.1	8.9	0.9	2043
Total energy costs under entitlement agreements					$ 174.1	

(c) *Electricity Swap and Forward Contracts*

In order to obtain the highest market value on energy that is sold into the wholesale market, the Power System monitors the sales price of energy, which varies based on which hub the energy is to be delivered. There are three primary hubs within the Power System's transmission region: Palo Verde, California Oregon Border, and Mead. The Power System enters into various locational swap transactions with other electric utilities in order to effectively utilize its transmission capacity and to achieve the most economical exchange of energy purchased and sold.

The Power System procures renewable energy resources located remotely. These resources provide intermittent and limited source of energy and some of these resources are not directly connected to the Power System's transmission system. In order to receive firm renewable energy, the Power System entered into a green-for-green energy exchange with the same or different Renewable Energy Credit source.

The Power System enters into power and natural gas forward contracts in order to meet the electricity requirements to serve its customers. To assist the Power System in achieving its Renewable Portfolio Standards (RPS), some of the forward purchases made were renewable energy and biomethane gas. Effective May 1, 2018 the Power System's biogas agreement (Agreement) was mutually terminated due to Southern California Gas Company's unstable transmission pipelines.

The Power System does not enter into swap and forward transactions for trading purposes. All of these transactions are intended to be used in the Power System's normal course of operations. The Power

System is exposed to risk of nonperformance if the counterparties default or if the swap agreements are terminated.

As of June 30, 2018, the Power System had the following Electricity Forward Contract, which is not recorded in the Power System's financial statements based on the criteria in GASB Statement No. 53 (amounts in thousands):

Description	Notional amount (total contract quantities)	Contract price range dollar per unit	First effective date	Last termination date	Fair value	Cash paid at inception
Forward contracts:						
Electricity	249,600 Mwh	$ 33.92–45.25	07/01/18	09/30/18	$ 1,799	—

As of June 30, 2017, the Power System had the following Electricity Swap and Forward Contracts, which are not recorded in the Power System's financial statements based on the criteria in GASB Statement No. 53 (amounts in thousands):

Description	Notional amount (total contract quantities)	Contract price range dollar per unit	First effective date	Last termination date	Fair value	Cash receive at inception
Forward contracts:						
Electricity	329,004 Mwh	$ 19.06 – 52.80	07/01/17	12/31/17	$ 776	—
Natural gas	10,296,000 MMBtu	10.85	07/01/17	10/31/21	(82,849)	—

(6) Regulatory Assets and Liabilities

Regulatory assets and liabilities are created by the actions of the Board of Water and Power Commissioners by deferring certain expenses and revenue that are recoverable or payable by future rate charges in accordance with the current rate ordinances so as to more evenly match the recognition of revenue and expenses with the electric rates charged to retail customers.

(In thousands)

Below is a summary of the Power System's regulatory assets and liabilities:

Description		June 30, 2017	Additions	Reductions	June 30, 2018
Assets:					
(a) Underrecovered costs – long term	$	155,628	—	(29,979)	125,649
(b) Regulatory assets – legal settlements		112,000	—	(16,000)	96,000
(c) Regulatory assets – solar incentive program		205,314	22,806	(12,996)	215,124
(d) Regulatory assets – energy efficiency program		374,687	166,767	(54,273)	487,181
(e) Regulatory assets – customer care and billing system		63,302	39,967	(2,878)	100,391
Regulatory assets – other		755,303	229,540	(86,147)	898,696
(f) Regulatory assets – pension		614,850	—	(132,657)	482,193
(g) Regulatory assets – OPEB		—	451,182	(21,110)	430,072
Total regulatory assets – noncurrent		1,525,781	680,722	(269,893)	1,936,610
(h) Under recovered costs – current		213,912	311,646	(213,912)	311,646
Total regulatory assets	$	1,739,693	992,368	(483,805)	2,248,256
Liabilities:					
(i) Deferred inflows from business activities		103,627	93	—	103,720
Total regulatory liabilities	$	103,627	93	—	103,720

Description		June 30, 2016	Additions	Reductions	June 30, 2017
Assets:					
(a) Underrecovered costs – long term	$	185,607	—	(29,979)	155,628
(b) Regulatory assets – legal settlements		128,000	—	(16,000)	112,000
(c) Regulatory assets – solar incentive program		200,121	17,292	(12,099)	205,314
(d) Regulatory assets – energy efficiency program		282,239	133,489	(41,041)	374,687
(e) Regulatory assets – customer care and billing system		36,314	29,761	(2,773)	63,302
Regulatory assets – other		646,674	180,542	(71,913)	755,303
(f) Regulatory assets – pension		670,425	—	(55,575)	614,850
Total regulatory assets – noncurrent		1,502,706	180,542	(157,467)	1,525,781
(h) Underrecovered costs – current		—	213,912	—	213,912
Total regulatory assets	$	1,502,706	394,454	(157,467)	1,739,693
Liabilities:					
(h) Overrecovered costs – current	$	44	—	(44)	—
(i) Deferred inflows from business activities		177,225	402	(74,000)	103,627
Total regulatory liabilities	$	177,269	402	(74,044)	103,627

(a) Under Recovered Costs – Long Term

These represent future receivables from customers related to costs incurred for renewable energy projects and the investments made in power reliability. The 2012 and 2016 Electric Rate Ordinances allow for these costs to be recovered though current rates. The costs are amortized over a 10-year period and are expected to be fully recovered by 2022, and thus, the Power system has classified them as noncurrent.

(b) Regulatory Assets – Legal Settlement

In June 2007, the Power System reached an agreement from the courts related to the inclusion of capital components in the rates charged to other governmental organizations. The agreement required the payment of $160,000 to the governmental organizations. The payment settlement included an immediate payout of $127,800, bill credits of $17,200 to be issued over a 10-year period, and $15,000 in payments to be paid over a 3-year period.

As provided in the Power System's rate structure, beginning in July 2014, customers' bills include a charge for this legal settlement to be collected over a 10-year period. As rates are established at a level sufficient to recover all such costs, the Power System recorded a regulatory asset.

(c) Regulatory Assets – Solar Incentive Programs

As part of the California Solar Incentive Program, initiated by 2006 Senate Bill 1 (SB1), the Power System implemented a multiyear program to provide customers with solar incentives for installing solar panels and necessary equipment to generate energy. The program, per SB1, concluded at the end of calendar year 2017. Some payments for these incentives were processed in 2018.

As provided in the Power System's rate structure, beginning April 2011, customers' bills include a charge for these solar incentive programs to be collected over a 15-year period. As rates are established at a level sufficient to recover all such costs, the Power System recorded a regulatory asset.

(d) Regulatory Assets – Energy Efficiency Programs

As part of the Power System's ongoing efforts to reduce energy consumption and improve the environment, the Power System implemented numerous multiyear programs. The program began in June 2012 and is expected to continue through 2020. At June 30, 2018 and 2017, the Power System has 26 energy efficiency programs.

As provided in the Power System's rate structure, beginning July 2011, customers' bills include a charge for these energy efficiency programs to be collected over a 5- to 15-year period, depending on the program. As rates are established at a level sufficient to recover all such costs, the Power System recorded a regulatory asset.

(e) Regulatory Assets – Customer Care and Billing System

In 2013, the Power System implemented the customer care and billing system (CC&B). The implementation of the system required significant investment in training of the Power System's employees.

As provided in the Power System's rate structure, beginning January 2014, customers' bills include a charge related to training for the CC&B to be collected over a 10-year period. As rates are established at a level sufficient to recover all such costs, the Power System recorded a regulatory asset.

(f) Regulatory Assets – Pension

In connection with the recognition of the net pension liability under GASB Statement No. 68, the Power System established a regulatory asset in the amount of $1,563,012, equal to the net pension liability reported at July 1, 2013. The pension regulatory asset is expected to be amortized over a period not to exceed 15 years. Amortization of the regulatory asset is the difference between the actuarial determined contributions and actual pension expense and totaled $132,657 and $55,575 for the years ended June 30, 2018 and 2017, respectively.

(g) Regulatory Assets – OPEB

In connection with the recognition of the net OPEB liability under GASB Statement No. 75, the Power System established a regulatory asset in the amount of $451,182 equal to the net OPEB liability reported at July 1, 2017. The OPEB regulatory asset is expected to be amortized over a period not to exceed 15 years. Amortization of the regulatory asset is the difference between amounts paid toward actuarial determined contributions and OPEB expense and totaled $21,110 for the year ended June 30, 2018.

(h) Underrecovered Costs – Current

As provided in the electric rate ordinances, the Power System is required to maintain balancing accounts to record differences between specific costs incurred and amounts billed through rates to recover those costs. The Power System plans to adjust rates to recover the accumulated balance in underrecovered costs in the next 12 months, and thus, overrecovered costs are shown as a current liability and underrecovered costs are shown as a current asset and represent the balance in the balancing accounts when the amount billed through rates is higher or lower than the costs the Power System has incurred. The Power System's current cost recovery policy recovers previous fiscal year underrecovered costs first prior to any new costs incurred in the current fiscal year. The Power System had $311,646 and $213,912 in under recovered costs for the years then ended June 30, 2018 and June 30, 2017.

(i) Deferred Inflows from Regulated Business Activities

These amounts represent revenue collected from customers where funds are deferred for future stabilization or deferred because the earnings process is not complete. For the year ended June 30, 2018, the Power System did not recognize any of this revenue. For the year ended June 30, 2017, the Power System recognized $74 million of this revenue.

(In thousands)

(7) Cash, Cash Equivalents, and Investments

(a) Restricted and Other Investments

A summary of the Power System's restricted investments is as follows:

		June 30	
		2018	**2017**
Restricted and other investments:			
Restricted investments:			
Debt reduction funds	$	460,613	456,482
Nuclear decommissioning funds		134,004	133,805
Natural gas fund		5,366	350
Hazardous waste treatment fund		2,275	2,250
Total restricted investments	$	602,258	592,887

The Power System also has $24 million and $11 million of cash collateral received from securities lending transactions in the City's securities lending program as of June 30, 2018 and 2017, respectively.

All restricted investments are to be used for a specific purpose as follows:

Debt Reduction Funds

The debt reduction funds were established during fiscal year 1997 to provide for the payment of principal and interest on long-term debt obligations and purchased power obligations arising from the Power System's participation in IPP and SCPPA (note 5). The Power System has transferred funds from purchased power precollections into these funds. Funds from operations may also be transferred by management as funds become available.

Nuclear Decommissioning Funds

Nuclear decommissioning funds will be used to pay the Power System's share of decommissioning PVNGS at the end of its useful life. See note 1(g).

Natural Gas Fund

The natural gas fund was established to serve as a depository to pay for costs and post margin or collateral in connection with contracts for the purchase and delivery of financial transactions for natural gas. These transactions are entered into to stabilize the natural gas portion of the Power System's fuel for generation costs.

Hazardous Waste Treatment Storage and Disposal Fund

The hazardous waste treatment storage and disposal fund was established to provide financial assurance for closure of the Main Street treatment and disposal facility.

As of June 30, 2018 and 2017, the Power System's restricted investments and their maturities are as follows (amounts in thousands):

2018 investment type		Fair value	Investment maturities: 1 to 30 days	31 to 60 days	61 to 365 days	366 days to 5 years	Over 5 years
U.S. government securities	$	32,759	4,998	—	19,941	7,820	—
U.S. agencies		234,674	7,246	11,983	101,523	87,421	26,501
Supranationals		16,867	1,999	4,997	4,935	4,936	—
Medium-term corporate notes		154,596	5,030	—	83,931	65,635	—
Commercial paper		20,097	9,995	4,986	5,116	—	—
Certificates of deposit		48,041	16,897	—	31,144	—	—
California local agency bonds		33,950	2,500	8,412	6,430	16,608	—
California state bonds		24,868	—	—	7,252	17,616	—
Other state bonds		30,914	—	5,966	6,179	18,769	—
Money market funds		5,492	5,492	—	—	—	—
	$	602,258	54,157	36,344	266,451	218,805	26,501

2017 investment type		Fair value	Investment maturities: 1 to 30 days	31 to 60 days	61 to 365 days	366 days to 5 years	Over 5 years
U.S. government securities	$	34,930	—	—	19,967	14,963	—
U.S. agencies		267,949	9,342	9,991	98,199	125,259	25,158
Supranationals		10,997	5,999	—	4,998	—	—
Medium-term corporate notes		134,573	5,066	1,000	76,785	51,722	—
Commercial paper		26,923	16,961	—	9,962	—	—
Certificates of deposit		43,014	8,000	5,002	30,012	—	—
California local agency bonds		28,551	—	8,153	7,011	13,387	—
California state bonds		10,080	—	—	1,005	9,075	—
Other state bonds		35,508	13,998	1,000	6,333	14,177	—
Money market funds		362	362	—	—	—	—
	$	592,887	59,728	25,146	254,272	228,583	25,158

Interest Rate Risk

The Power System's investment policy limits the maturity of its investments to a maximum of 30 years for U.S. government and U.S. government agency securities; 5 years for medium-term corporate notes, California local agency obligations, California state obligations, and other state obligations; 270 days for commercial paper; 397 days for certificates of deposit; and 180 days for bankers' acceptances.

Credit Risk

Under its investment policy and the Government Code, the Power System is subject to the prudent investor standard of care in managing all aspects of its portfolios. The prudent investor standard requires that the Power System "shall act with care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the agency, that a prudent person acting in a like capacity and in familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the agency."

The U.S. government agency securities in the portfolio consist of securities issued by government-sponsored enterprises, which are not explicitly guaranteed by the U.S. government. Of the U.S. government agency securities in the portfolio as of June 30, 2018, $226,538,736 (97%) was rated with either the highest or second highest possible credit ratings by the Nationally Recognized Statistical Rating Organizations (NRSROS) that rated them and $8,135,454 (3%) was not rated. Of the U.S. government agency securities in the portfolio as of June 30, 2017, $263,629,940 (98%) was rated with either the highest or second highest possible credit ratings by the NRSROS that rated them and $4,319,051 (2%) was not rated.

The Power System's investment policy specifies that medium-term corporate notes must be rated in a rating category of A or its equivalent or better by a NRSRO. Of the Power System's investments in corporate notes as of June 30, 2018, $7,925,971 (5%) was rated in the category of AAA, $51,034,198 (33%) was rated in the category of AA, and $95,605,095 (62%) was rated in the category of A by at least one NRSRO. The remaining $30,543 (less than 1%) of investments in corporate notes was not rated. Of the Power System's investments in corporate notes as of June 30, 2017, $9,579,905 (7%) was rated in the category of AAA, $71,083,223 (53%) was rated in the category of AA, and $53,843,279 (40%) was rated in the category of A by at least one NRSRO. The remaining $65,779 (less than 1%) of investments in corporate notes was not rated.

The Power System's investment policy specifies that commercial paper must be of the highest ranking or of the highest letter and number rating as provided for by at least two NRSROs. As of June 30, 2018 and 2017, all of the Power System's investments in commercial paper were rated with at least the highest letter and number rating as provided by at least two NRSROs.

The Power System's investment policy provides that negotiable certificates of deposit must be of the highest ranking or letter and number rating as provided for by at least two NRSROs and that for nonnegotiable certificates of deposit, the full amount of principal and interest is insured by the Federal Deposit Insurance Corporation (FDIC) or National Credit Union Administration. As of June 30, 2018, all of the Power System's investments in certificates of deposit consisted of negotiable certificates of deposit with at least the highest letter and number rating as provided by at least two NRSROs. As of June 30, 2017, the Power System's investments in certificates of deposit included $42,014,082 of negotiable certificates of deposit with at least the highest letter and number rating as provided by at least two NRSROs and $1,000,000 of nonnegotiable certificates of deposit fully insured by the FDIC.

The Power System's investment policy specifies that California local agency obligations must be rated in a rating category of A or its equivalent or better by a NRSRO. Of the Power System's investments in California local agency bonds as of June 30, 2018, $5,688,255 (17%) was rated in the category of AAA, $20,843,995 (61%) was rated in the category of AA, and $7,418,214 (22%) was rated in the category of A or the equivalent or better short-term rating. As of June 30, 2017, all of Power System's investments in California local agency bonds were rated in the category of AA.

The Power System's investment policy specifies that State of California obligations must be rated in a rating category of A or its equivalent or better by a NRSRO. As of June 30, 2018 and June 30, 2017, all of the Power System's investments in State of California obligations were rated in the category of AA by at least one NRSRO.

The Power System's investment policy specifies that obligations of other states in addition to California must be rated in a rating category of A or its equivalent or better by a NRSRO. Of the Power System's investments in other state obligations as of June 30, 2018, $12,879,130 (41%) was rated in the category of AAA, $10,100,109 (33%) was rated in the category of AA, and $7,934,920 (26%) was rated in the category of A by at least one NRSRO. Of the Power System's investments in other state obligations as of June 30, 2017, $15,352,490 (43%) was rated in the category of AAA, $13,163,374 (37%) was rated in the category of AA, $1,993,680 (6%) was rated in the category of A, and $4,998,104 (14%) was rated with the highest short-term rating by at least one NRSRO.

The Power System's investment policy specifies that money market funds may be purchased as allowed under the Government Code, which requires that the fund must have either (1) attained the highest ranking or highest letter and numerical rating provided by not less than two NRSROs or (2) retained an investment adviser registered or exempt from registration with the Securities and Exchange Commission (SEC) with not less than five years' experience in managing money market mutual funds with assets under management in excess of $500 million. As of June 30, 2018 and 2017, each of the money market funds in the portfolio had the highest possible ratings by at least two NRSROs.

Concentration of Credit Risk

The Power System's investment policy specifies that there is no percentage limitation on the amount that can be invested in U.S. government agency securities, except that a maximum of 30% of the cost value of the portfolio may be invested in the securities of any single U.S. government agency issuer.

Of the Power System's total investments as of June 30, 2018, $79,853,489 (13%) was invested in securities issued by the Federal Home Loan Mortgage Corporation, $68,478,094 (11%) was invested in securities issued by the Federal Home Loan Bank, $49,565,156 (8%) was invested in securities issued by the Federal National Mortgage Association, and $27,612,366 (5%) was invested in securities issued by the Federal Farm Credit Bank.

Of the Power System's total investments as of June 30, 2017, $102,726,035 (17%) was invested in securities issued by the Federal Home Loan Bank, $88,814,829 (15%) was invested in securities issued by the Federal Home Loan Mortgage Corporation, and $46,504,874 (8%) was invested in securities issued by the Federal National Mortgage Association.

Custodial Risk

All investments are held in the Power System's name, and therefore, they do not have custodial risk.

Fair Value Measurements

The Power System holds investments and derivative instruments that are measured at fair value on a recurring basis. Because investing is not a core part of the Power System's mission, the Power System determines that the disclosures related to these investments only need to be disaggregated by major type. The Power System chooses a tabular format for disclosing the levels within the fair value hierarchy. The Power System categorizes its fair value measurements within the fair value hierarchy established by U.S. GAAP.

The hierarchy is based on the valuation inputs used to measure the fair value of the asset, as follows:

Level 1 inputs are quoted prices for identical assets or liabilities in an active market.

Level 2 inputs are quoted prices of similar assets or liabilities in active or not active markets.

Level 3 inputs are unobservable inputs using the best information available to management.

		Fair value using			
	June 30, 2018	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Not Classified
			(In thousands)		
Investments by fair value level:					
Debt securities:					
U.S. government securities	$ 32,759	32,759	—	—	—
U.S. agencies	234,674	—	234,674	—	—
Supranationals	16,867	—	16,867	—	—
Medium-term corporate notes	154,596	—	154,596	—	—
California local agency bonds	33,950	—	33,950	—	—
California state bonds	24,868	—	24,868	—	—
Other state bonds	30,914	—	30,914	—	—
Total debt securities	528,628	32,759	495,869	—	—

		June 30, 2018	Fair value using: Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Not Classified
				(In thousands)		
Other:						
Commercial paper	$	20,097	—	20,097	—	—
Certificates of deposit		48,041	—	48,041	—	—
Money market funds		5,492	—	—	—	5,492
Total other		73,630	—	68,138	—	5,492
Total investments by fair value level	$	602,258	32,759	564,007	—	5,492
Derivative instruments:						
Financial natural gas hedges	$	(22,204)	—	(22,204)	—	—

		June 30, 2017	Fair value using: Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Not Classified
				(In thousands)		
Investments by fair value level:						
Debt securities:						
U.S. government securities	$	34,930	34,930	—	—	—
U.S. agencies		267,949	—	267,949	—	—
Supranationals		10,997	—	10,997	—	—
Medium-term corporate notes		134,572	—	134,572	—	—
California local agency bonds		28,550	—	28,550	—	—
California state bonds		10,081	—	10,081	—	—
Other state bonds		35,508	—	35,508	—	—
Total debt securities		522,587	34,930	487,657	—	—

		Fair value using			
	June 30, 2017	**Quoted prices in active markets for identical assets (Level 1)**	**Significant other observable inputs (Level 2)**	**Significant unobservable inputs (Level 3)**	**Not Classified**
			(In thousands)		
Other:					
Commercial paper	$ 26,924	—	26,924	—	—
Certificates of deposit	43,014	—	43,014	—	—
Money market funds	362	—	—	—	362
Total other	70,300	—	69,938	—	362
Total investments by fair value level	$ 592,887	34,930	557,595	—	362
Derivative instruments:					
Financial natural gas hedges	$ (14,640)	—	(14,640)	—	—

Debt and other securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 of the fair value hierarchy are valued using a multidimensional relationship model or matrix pricing model utilizing market data, including, but not limited to, benchmark yields, reported trades, and broker-dealer quotes. Natural gas hedges are valued using forward market prices available from broker quotes and exchanges. Money market funds have maturities of less than one year and, thus, are recorded at amortized cost and not required to be classified.

(b) Pooled Cash

The Power System's cash, cash equivalents, and its collateral value of the City's securities lending program are included within the City Treasury's general and special investment pool. As of June 30, 2018 and 2017, the Power System's share of the City's general and special investment pool was $1,478,381 and $1,665,102, which represents approximately 15.3% and 16.2% of the pool, respectively. Amounts pooled in the City Treasury's general and special investment pool are not required to be classified in the fair value hierarchy per GASB Statement No. 72 since they are part of an internal investment pool.

(Continued)

Pooled cash is recorded as follows on the statements of net position as of June 30, 2018 and 2017 (in thousands):

		June 30	
		2018	**2017**
Cash and cash equivalents – unrestricted	$	751,164	991,182
Cash and cash equivalents – restricted noncurrent		318,455	312,267
Cash and cash equivalents – restricted current		384,648	350,256
Subtotal cash and cash equivalents per cash flow		1,454,267	1,653,705
Cash – securities lending transactions		24,114	11,397
	$	1,478,381	1,665,102

The cash balances of substantially all funds on deposit in the City Treasury are pooled and invested by the City Treasurer for the purpose of maximizing interest earnings through pooled investment activities, but safety and liquidity still take precedence over return. Special pool participants include the City, airports, the Department of Water and Power, harbor, sanitation, and the Municipal Improvement Corporation of Los Angeles. Interest earned on pooled investments is allocated to and recorded in certain participating funds, as authorized by the Council and permitted by the City Charter and the Government code, based on each fund’s average daily deposit balance. Unless allocation provisions are specifically stipulated in City ordinance, Council action, or funding source, interest earned on certain funds is allocated to and recorded in the general fund. The City measures and categorizes its investments using fair value measurement guidelines established by GAAP and GASB Statement No. 72.

Pursuant to California Government Code Section 53607 and the Council File No. 94-2160, the City Treasury shall render to the Council a statement of investment policy (the Policy) annually. Council File No. 11-1740 was adopted on December 12, 2016 as the City’s investment policy. This policy shall remain in effect until the Council and the mayor approve a subsequent revision. The Policy governs the City’s pooled investment practices. The Policy addresses soundness of financial institutions in which the City Treasurer will deposit funds and types of investment instruments permitted by California Government Code Sections 53600-53638, 16340, and 16429.1. The City Treasury further reports that the current policy allows for the purchase of investments with maturities up to 30 years.

At June 30, 2018, the investments held in the City Treasury's general and special investment pool programs and their maturities are as follows (in thousands):

		Investment maturities				
Type of investments	**Amount**	**1 to 30 days**	**31 to 60 days**	**61 to 365 days**	**366 days to 5 years**	**Over 5 years**
U.S. Treasury bills	$ 48,872	7,765	41,107	—	—	—
U.S. Treasury notes	5,749,557	—	—	878,442	4,857,135	13,980
U.S. agencies securities	806,638	181,205	57,937	92,173	427,013	48,310
Medium-term notes	1,424,599	10,002	—	186,343	1,228,254	—
Mutual funds	4,787	4,787	—	—	—	—
Commercial paper	813,424	632,859	50,950	129,615	—	—
Municipal bonds	78,274	—	—	19,973	58,301	—
Asset-backed securities	113,973	—	—	—	113,973	—
Supranational obligations	298,584	156,606	—	—	141,978	—
Short-term investment funds	177,796	177,796	—	—	—	—
Securities lending short-term repurchase agreement	163,710	163,710	—	—	—	—
Total general and special pools	$ 9,680,214	1,334,730	149,994	1,306,546	6,826,654	62,290

Interest Rate Risk. The Policy limits the maturity of its investments to 5 years for U.S. Treasury and U.S. agency obligations, medium-term notes, certificate of deposit placement service, negotiable certificates of deposit, collateralized bank deposits, mortgage pass-through securities, supranational obligations, and bank/time deposits; 1 year for repurchase agreements; 270 days for commercial paper; 180 days for bankers' acceptances; 92 days for reverse repurchase agreements; and no maturity for mutual funds. The Policy also allows city funds with longer-term investments horizons to be invested in securities that, at the time of the investment, have a term remaining to maturity in excess of 5 years but with a maximum final maturity of 30 years.

Credit Risk. The Policy establishes minimum credit rating requirements for investments. There are no credit quality requirements for local agency bonds, U.S. Treasury obligations, State of California obligations, California Local Agency obligations, and U.S. agency (U.S. government–sponsored enterprises) securities. The City's $806.6 million investments in U.S. government–sponsored enterprises consist of securities issued by the Federal Home Loan Bank - $227.8 million, Federal National Mortgage Association (Fannie Mae) – $403.7 million, and Federal Home Loan Mortgage Corporation (Freddie Mac) – $175.1 million. Of the City's $806.6 million investments in U.S. agency securities, $546.1 million were rated AA+ by S&P and Aaa by Moody's; $260.5 million were not rated individually by S&P nor Moody's.

Medium-term notes must be issued by corporations organized and operating within the United States or by depository institutions licensed by the United States or any state and operating within the United States. Medium-term notes must have at least an A rating at the time of purchase. The City's $1.4 billion investments in medium-term notes consist of securities issued by banks and corporations that comply with these requirements and were rated A or better by S&P and A3 or better by Moody's. One issuer of $20.0 million medium-term notes was downgraded to A- by S&P and Baa1 by Moody's.

Commercial paper issues must have the highest letter and number rating by nationally recognized statistical rating organization (NRSRO). The issuing corporation must be organized and operating within the United States and have assets in excess of $500.0 million. The City's $813.4 million investments in commercial paper were rated A-1+/A-1 by S&P and P-1 by Moody's.

Mutual funds must receive the highest ranking by at least two NRSROs. The City's $4.8 million investments in mutual funds were rated AAAm by S&P and not rated by Moody's.

Municipal bonds have no minimum rating requirement. The City's $78.3 million investments in municipal bonds were rated AA- by S&P and Aa3 by Moody's in supranational obligations must have a minimum of AA rating.

The City's investments in supranational coupons of $142.0 million were rated AAA by S&P and Aaa by Moody's; $156.6 million were not rated individually by S&P nor Moody's.

Concentration of credit risk. The Policy does not allow more than 40% of its investment portfolio to be invested in commercial paper or bankers' acceptances, 30% in certificates of deposit or medium-term notes, or 20% in mutual funds, money market mutual funds, or mortgage pass-through securities. The Policy further provides for a maximum concentration limit of 10% in any one issuer, including its related entities. There is no percentage limitation on the amounts that can be invested in U.S. Treasury and U.S. agency obligations. The City's pooled investments comply with these requirements. GAAP requires disclosure of certain investments in any one issuer that represent 5% or more of total investments. Of the City's total pooled investments, no one issuer represents 5% or more of the total investments as of June 30, 2018.

At June 30, 2017, the investments held in the City Treasury's general and special investment pool programs and their maturities are as follows (in thousands):

			Investment maturities			
Type of investments		**Amount**	**1 to 30 days**	**31 to 60 days**	**61 to 365 days**	**366 days to 5 years**
U.S. Treasury notes	$	4,784,091	—	—	2,812	4,761,266
U.S. agencies securities		1,468,181	182,345	220,935	560,889	469,324
Medium-term notes		1,440,354	—	—	190,051	1,250,303
Mutual fund		7,251	7,251	—	—	—
Commercial paper		1,418,930	732,478	238,464	447,989	—
Municipal bonds		79,684	—	—	—	79,683
Asset-backed securities		70,100	—	—	—	70,100
Supranational obligations		650,957	454,777	15,000	31,755	149,425
Short-term investment funds		284,148	284,148	—	—	—
Securities lending short-term repurchase agreement		67,115	67,115	—	—	—
Total general and special pools	$	10,270,811	1,728,114	474,399	1,233,496	6,780,101

Interest rate risk. The Policy limits the maturity of its investments to 5 years for the U.S. Treasury and U.S. agency obligations, medium-term notes, CD placement service, negotiable certificates of deposit, collateralized bank deposits, mortgage pass-through securities, supranational obligations, and bank/time deposits; 1 year for repurchase agreements; 270 days for commercial paper; 180 days for bankers' acceptances; 92 days for reverse repurchase agreements; and no maturity for mutual funds. The Policy also allows city funds with longer-term investments horizons to be invested in securities that, at the time of the investment, have a term remaining to maturity in excess of 5 years but with a maximum final maturity of 30 years.

Credit risk. The Policy establishes minimum credit rating requirements for investments. There are no credit quality requirements for local agency bonds, U.S. Treasury obligations, State of California obligations, California local agency obligations, and U.S. agency (U.S. government–sponsored enterprises) securities. The City's $1.5 billion investments in U.S. government–sponsored enterprises consist of securities issued by the Federal Home Loan Bank – $758.2 million, Federal National Mortgage Association (Fannie Mae) – $354.5 million, Federal Home Loan Mortgage Corporation (Freddie Mac) – $240.1 million, Federal Agriculture Mortgage Corporation (Farmer Mac) – $95.2 million, and Tennessee Valley Authority – $20.1 million. Of the City's $1.5 billion investments in U.S. agency securities, $499.1 million were rated AA+ by S&P and Aaa by Moody's; $969.0 million were not rated individually by S&P nor Moody's.

Medium-term notes must be issued by corporations organized and operating within the United States or by depository institutions licensed by the United States or any state and operating within the United States. Medium-term notes must have at least an A rating at the time of purchase. The City's

$1.4 billion investments in medium-term notes consist of securities issued by banks and corporations that comply with these requirements and were rated A or better by S&P and A3 or better by Moody's. Subsequent to purchase, two issuers of $62.6 million medium-term notes were downgraded to BBB+ by S&P and A3 by Moody's, and one issuer of $20.0 million medium-term notes was downgraded to A by S&P and Baa1 by Moody's.

Commercial paper issues must have the highest letter and number rating by an NRSRO. The issuing corporation must be organized and operating within the United States and have assets in excess of $500.0 million. The City's $1.4 billion investments in commercial paper were rated A-1+/A-1 by S&P and P-1 by Moody's.

Mutual funds must receive the highest ranking by at least two NRSRO. The City's $7.3 million investments in mutual fund were rated AAAm by S&P and not rated by Moody's.

Municipal bonds have no minimum rating requirement. The City's $79.7 million investments in municipal bonds were rated AA- by S&P and Aa3 by Moody's.

Investments in supranational coupons must have a minimum of AA rating. The City's investments in supranational coupons of $149.4 million were rated AAA by S&P and Aaa by Moody's; $501.5 million were not rated individually by S&P nor Moody's.

Concentration of credit risk. The Policy does not allow more than 40% of its investment portfolio to be invested in commercial paper or bankers' acceptances, 30% in certificates of deposit or medium-term notes, or 20% in mutual funds, money market mutual funds, or mortgage pass-through securities. The Policy further provides for a maximum concentration limit of 10% in any one issuer, including its related entities. There is no percentage limitation on the amounts that can be invested in U.S. Treasury and U.S. agency obligations. The City's pooled investments comply with these requirements. GAAP requires disclosure of certain investments in any one issuer that represents 5% or more of total investments. Of the City's total pooled investments as of June 30, 2017, $693.8 million (6.8%) was invested in securities issued by Federal Home Loan Bank.

(In thousands)

The following table identifies the investment types that are authorized by the Policy as of June 30, 2018 and 2017:

Authorized Investment Type	Maximum Maturity [A]	Maximum Specified Percentage of Portfolio [B]	Minimum Credit Quality Requirements
Local Agency Bonds	5 years	None	None
U.S. Treasury Obligations	5 years*	None	None
State Obligations – CA and Others	5 years	None	None
CA Local Agency Obligations	5 years	None	None
U.S. Agency Obligations	5 years*	None	None
Bankers' Acceptances	180 days	40%* [C]	None
Commercial Paper – Pooled Funds* [G]	270 days	40% of the agency's money [E]	Highest letter and number rating by an NRSRO [F]
Commercial Paper – Non-Pooled Funds* [D]	270 days	25% of the agency's money [E]	Highest letter and number rating by an NRSRO [F]
Negotiable Certificates of Deposits	5 years	30% [H] (combined with placement service CD)	None
Non-Negotiable Certificates of Deposits	5 years	None	None
Placement Service Deposits	5 years	30% I (inclusive of placement service CD)	None
Placement Service Certificate of Deposits	5 years	30% [I] (combined with negotiable CD)	None
Repurchase Agreements	1 year	None	None
Reverse Repurchase Agreements and Securities Lending Agreements	92 days [J]	20% of the base value of the portfolio	None [K]
Medium-Term Notes* [L]	5 years	30%	"A" rating category or its equivalent or better
Mutual Funds and Money Market Mutual Funds	N/A	20%	Multiple [N,O]
Collateralized Bank Deposits	5 years	None	None
Mortgage Pass-Through Securities	5 years	20%	"AA" rating category or its equivalent or better
County Pooled Investments Funds	N/A	None	None
Joint Powers Authority Pool	N/A	None	Multiple [Q]
Local Agency Investment Fund (LAIF)	N/A	None	None
Voluntary Investment Program Fund [R]	N/A	None	None
Supranational Obligations [S]	5 years	30%	"AA" rating category or its equivalent or better

* Represents where the City's investment policy is more restrictive than the California Government Code. The sources used are Sections 16340, 16429.1, 53601, 53601.8, 53635, 53635.2, and 53638. Municipal utilities districts have the authority under the Public Utilities Code Section 12871 to invest in certain securities not addressed here.

Other restrictions on investments are summarized as follows:

[A] Section 53601 provides that the maximum term of any investment authorized under this section, unless otherwise stated, is five years. However, the legislative body may grant express authority to make investments either specifically or as a part of an investment program approved by the legislative body that exceeds this five-year maturity limit. Such approval must be issued no less than three months prior to the purchase of any security exceeding the five-year maturity limit.

[B] Percentages apply to all portfolio investments, regardless of source of funds. For instance, cash from a reverse repurchase agreement would be subject to the restrictions.

[C] No more than 30% of the agency's money may be in bankers' acceptances of any one commercial bank.

[D] "Select agencies" are defined as a "city, a district, or other local agency that does not pool money in deposits or investment with other local agencies, other than local agencies that have the same governing body."

[E] Local agencies, other than counties or a city and county, may purchase no more than 10% of outstanding commercial paper of any single issuer.

[F] Issuing corporation must be organized and operating within the United States and have assets in excess of $500.0 million.

[G] "Other agencies" are counties, a city and county, or other local agency "that pools money in deposits or investments with other local agencies, including local agencies that have the same governing body." Local agencies that pool exclusively with other local agencies that have the same governing body must adhere to the limits set for "Select agencies" above.

[H] No more than 30 percent of the agency's money may be in negotiable certificates of deposit that are authorized under Section 53601(i).

[I] No more than 30% of the agency's money may be invested in deposits, including CDs, through a placement service. No more than 30% of the agency's money may be invested in CDs through a placement service and negotiable CDs based on Sections 53601.8, 53635.8, and 53601(i). Excluding purchases of certificates of deposit pursuant to Sections 53601.8 and 53635.8, no more than 10% of the agency's money may be invested with any one private sector entity that assists in the placement of deposits.

[J] Reverse repurchase agreements or securities lending agreements may exceed the 92-day term if the agreement includes a written codicil guaranteeing a minimum earning or spread for the entire period between the sale of a security using a reverse repurchase agreement or securities lending agreement and the final maturity dates of the same security.

K Reverse repurchase agreements must be made with primary dealers of the Federal Reserve Bank of New York or with a nationally chartered or state-chartered bank that has a significant relationship with the local agency. The local agency must have held the securities used for the agreements for at least 30 days.

L "Medium-term notes" are defined in Section 53601 as "all corporate and depository institution debt securities with a maximum remaining maturity of five years or less, issued by corporations organized and operating within the U.S. or by depository institutions licensed by the U.S. or any state and operating within the U.S."

M No more than 10% invested in any one mutual fund. This limitation does not apply to money market accounts.

N A mutual fund must receive the highest ranking by not less than two nationally recognized rating agencies or the fund must retain an investment adviser who is registered with the SEC (or exempt from registration), has assets under management in excess of $500.0 million, and has at least five years' experience investing in instruments authorized by Sections 53601 and 53635.

O A money market mutual fund must receive the highest ranking by not less than two nationally recognized statistical rating organizations or retain an investment adviser registered with the SEC or exempt from registration and who has not less than five years' experience investing in money market instruments with assets under management in excess of $500.0 million.

P Issuer must be rated in the category "A," or its equivalent or better, as provided by a nationally recognized rating agency.

Q A joint powers authority pool must retain an investment advisor who is registered with the SEC (or exempt from registration), has assets under management in excess of $500.0 million, and has at least five years' experience investing in instruments authorized by Section 53601, subdivisions (a) to (o).

R Local entities can deposit between $200.0 million and $10.0 billion into the Voluntary Investment Program Fund upon approval by their governing bodies. Deposits in the fund will be invested in the Pooled Money Investment Account.

S Only those obligations issued or unconditionally guaranteed by the International Bank for Reconstruction and Development, International Finance Corporation, and Inter-American Development Bank.

General Investment Pool Securities Lending Program.

Securities lending is permitted and limited under provisions of California Government Code Section 53601. The Council approved the Securities Lending Program (SLP) on October 22, 1991 under Council File No. 91-1860, which complies with the California Government Code. The objectives of the SLP in priority order are safety of loaned securities and prudent investment of cash collateral to enhance revenue from the investment program. The SLP is governed by a separate policy and guidelines.

The City's custodial bank acts as the securities lending agent. In the event a counterparty defaults by reason of an act of insolvency, the bank shall take all actions, which it deems necessary or appropriate to liquidate permitted investment and collateral in connection with such transaction, and shall make a reasonable effort for two business days (the Replacement Period) to apply the proceeds thereof to the purchase of securities identical to the loaned securities not returned. If during the Replacement Period the collateral liquidation proceeds are insufficient to replace any of the loaned securities not returned, the bank shall, subject to payment by the City of the amount of any losses on any permitted investments, pay such additional amounts, as necessary, to make such replacement.

Under the provisions of the SLP, and in accordance with the California Government Code, no more than 20% of the market value of the General Investment Pool is available for lending. The City loans out U.S. Treasury notes and U.S. agency securities (e.g., Fannie Mae, Freddie Mac, Federal Home Loan Bank, Federal Agricultural Mortgage Corporation, Federal Farm Credit Bank, and Tennessee Valley Authority), medium-term notes, and supranational coupons. The City receives cash as collateral on the loaned securities, which is reinvested in securities permitted under the Policy. In addition, the City receives securities as collateral on loaned securities, which the City has no ability to pledge or sell without borrower default. In accordance with the California Government Code, the securities lending agent marks to market the value of both the collateral and the reinvestments daily. Except for open loans where either party can terminate a lending contract on demand, term loans have a maximum life of 60 days. Earnings from securities lending accrue to the Pool and are allocated on a pro rata basis to all pool participants.

During the fiscal year 2018, collateralizations on all loaned securities were compliant with the required 102% of the market value. The City can sell collateral securities only in the event of borrower default. The lending agent provides indemnification for borrower default. There were no violations of legal or contractual provisions and no borrower or lending agent default losses during the fiscal year. There was no credit risk exposure to the City because the amounts owed to the borrowers exceeded the amounts borrowed. Loaned securities are held by the City's agents in the City's name and are not subject to custodial credit risk.

(Continued)

The following table provides information on securities lent and collateral received as of June 30 (in thousands):

		2018		2017
Type of investment lent:				
For cash collateral:				
U.S. agency securities	$	133,116		40,648
U.S. Treasury notes		5,967		1,012
Supranational coupons		4,037		24,014
Medium-term notes		17,210		—
Total lent for cash collateral		160,330		65,674
For noncash collateral:				
U.S. Treasury notes		245,904		981,789
U.S. agency securities		30,214		31,397
Medium-term notes		—		—
Total lent for noncash collateral		276,118		1,013,186
Total securities lent	$	436,448		1,078,860
Type of collateral received				
Cash collateral*	$	163,710		67,115
Noncash collateral**				
For lent U.S. Treasury notes, U.S. agency securities, medium-term notes, and supranational coupons		282,448		1,037,782
Total collateral received	$	446,158	$	1,104,897

* Amount represents cash collateral received and reinvested in repurchase agreements that have the mark-to-market value of the cash collateral pool at 102% for the liquidity of the portfolio and 100% for the duration portfolio for fiscal years 2017 and 2018

** The City has no ability to pledge or sell collateral securities without borrower default.

Fair Value Measurements

The City measures and categorizes its investments using fair value measurement guidelines established by GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset or liability. The levels of valuation inputs are as follows:

Level 1 – Quoted prices for identical assets or liabilities in an active market

Level 2 – Observable inputs other than quoted market prices

Level 3 – Unobservable inputs.

At June 30, 2018 and 2017, the City's summary of the fair value hierarchy of investments is as follows (in thousands):

			June 30, 2018	
			Fair value measurements using	
Investments		**Amount**	**Quoted prices in active markets for identical Assets (Level 1)**	**Significant other observable inputs Assets (Level 2)**
Investment Subject to fair value hierarchy:				
U.S. Treasury notes	$	5,749,557	49,763	5,699,794
U.S. agency securities		546,116	—	546,116
Medium-term notes		1,424,599	—	1,424,599
Municipal bonds		78,274	—	78,274
Asset-backed securities		113,973	—	113,973
Supranational obligations		141,978	—	141,978
Total investments subject to fair value		8,054,497	49,763	8,004,734
Investment not subject to fair value hierarchy:				
Mutual fund*		177,796		
Short-term investment funds*		48,872		
U.S. agency securities*		260,522		
Commercial paper*		813,424		
Supranational obligations*		156,606		
Securities lending short-term repurchase agreement **		163,710		
Total investments not subject to fair value hierarchy		1,620,930		
Total investments measured at fair value		9,675,427		
Investments measured at the net asset value (NAV)				
Mutual fund – AMT-Free, tax-exempt		4,787		
Total investments	$	9,680,214		

* These investments are recorded at amortized cost that has remaining maturities of one year or less at the time of purchase.

** These investments are recorded based on the cash collateral received and reinvested in repurchase agreement.

(In thousands)

		June 30, 2017	
		Fair value measurements using	
Investments	Amount	Quoted prices in active markets for identical Assets (Level 1)	Significant other observable inputs Assets (Level 2)
Investment subject to fair value hierarchy:			
U.S. Treasury notes	$ 4,784,091	601,390	4,182,701
U.S. agency securities	514,127	35,348	478,779
Medium-term notes	1,440,354	—	1,440,354
Municipal bonds	79,684	—	79,684
Asset-backed securities	70,100	—	70,100
Supranational obligations	149,425	—	149,425
Total investments subject to fair value	7,037,781	636,738	6,401,043
Investment not subject to fair value hierarchy:			
Mutual fund*	7,251		
Short-term investment funds*	284,148		
U.S. agency securities*	954,054		
Commercial paper*	1,418,930		
Supranational obligations*	501,532		
Securities lending short-term repurchase agreement **	67,115		
Total investments not subject to fair value	3,233,030		
Total investments	$ 10,270,811		

* These investments are recorded at amortized cost that has remaining maturities of one year or less at the time of purchase.

** These investments are recorded based on the cash collateral received and reinvested in repurchase agreement.

Investments classified in Level 1 of the fair value hierarchy of $49.8 million and $636.7 million at June 30, 2018 and 2017, respectively, are valued using observable unadjusted quoted prices in an active market.

Investments in the Level 2 classification totaling $8 billion and $6.4 billion at June 30, 2018 and 2017, respectively, are valued using matrix pricing obtained from various pricing sources by the City's custodian bank. At the time of purchase, securities are automatically assigned a primary pricing source, which is used in the portfolio valuation report and evaluated based on market inputs, such as benchmark yields, reported trades, broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data.

Investments measured at NAV (in thousands):

		Fair value	Unfunded commitments	Redemption frequency	Redemption notice period
Mutual funds – AMT-Free, tax-exempt	$	4,787	—	Anytime	—

Mutual fund investments measured at NAV normally invest substantially all of their assets in short-term, high-quality municipal obligations that provide income exempt from federal income taxes. The fund also may invest in high-quality, short-term structured notes that are derivative instruments whose value is tied to underlying municipal obligations. There are no restrictions on redemption and no stipulated redemption notice period.

(8) Derivative Instruments

In accordance with GASB Statement No. 53, the Power System records the fair value of its financial natural gas hedges, on the statement of net position. As of June 30, 2018 and 2017, the fair values of the financial natural gas hedges were approximately $(22.2) million and approximately $(14.6) million, respectively. The Power System enters into natural gas hedging contracts in order to stabilize the cost of gas needed to produce electricity to serve its customers. It is designed to cap gas prices over a portion of the forecasted gas requirements. The Power System does not speculate when entering into financial transactions. Financial hedges are variable to fixed-rate swaps and are layered by volumetric averaging. The Power System is exposed to financial settlement risk if the counterparties default and/or the agreements are terminated. The Power System did not receive any payments at the inception of any swap transaction.

As of June 30, 2018, the Power System's financial natural gas hedges by fiscal year are the following (amounts in thousands):

Derivative description	Notional amount (total contract quantities*)		Contract price range dollar per unit	First effective date	Last termination date		Fair value
Financial natural gas:							
FY 2018–19	28,287,500	$	2.03-2.78	07/01/18	06/30/19		(7,575)
FY 2019–20	20,130,000		1.87-2.83	07/01/19	06/30/20		(7,566)
FY 2020–21	13,140,000		1.93-2.61	07/01/20	06/30/21		(3,702)
FY 2021–22	7,300,000		2.04-2.47	07/01/21	06/30/22		(2,658)
FY 2022–23	1,825,000		2.26-2.50	07/01/22	06/30/23		(703)
Total	70,682,500					$	(22,204)

* Contract quantities in MMBtu – Million British Thermal Units

As of June 30, 2017, the Power System's financial natural gas hedges by fiscal year are the following (fair value in thousands):

Derivative description	Notional amount (Total contract quantities*)	Contract price range dollar per unit	First effective date	Last termination date	Fair value
Financial natural gas:					
FY 2017–18	18,432,500	$ 2.72-7.14	07/01/17	06/30/18	(12,493)
FY 2018–19	10,950,000	2.51-2.78	07/01/18	06/30/19	(1,411)
FY 2019–20	5,490,000	2.48-2.83	07/01/19	06/30/20	(704)
FY 2020–21	365,000	2.61	07/01/20	06/30/21	(32)
Total	35,237,500				$ (14,640)

* Contract quantities in MMBtu – Million British Thermal Units

The fair value of the natural gas hedges decreased by $7.60 million during the year ended June 30, 2018 due to the drop in natural gas prices and is reported as a liability and is offset by a deferred outflow on the statement of net position. All fair values were estimated using forward market prices available from broker quotes and exchanges.

(a) Credit Risk

The Power System is exposed to credit risk related to nonperformance by its counterparties under the terms of contractual agreements. In order to limit the risk of counterparty default, the Power System has implemented a Counterparty Evaluation Credit Policy (Credit Policy). The Credit Policy has been amended from time to time, and the latest board approval was on November 28, 2017. The Credit current scope includes physical power, transmission, physical natural gas, financial natural gas, and environmental products. Also, the credit limit structure are categorized into short-term and long-term structures where the short-term structure is applicable to transactions with terms of up to 18 months and the long-term structure to cover transactions beyond 18 months.

The Policy includes provisions to limit risk, including the assignment of internal credit ratings to all of the Power System's counterparties based on counterparty and/or debt ratings; the use of expected default frequency equivalent credit rating for short-term transactions; the requirement for credit enhancements (including advance payments, irrevocable letters of credit, escrow trust accounts, and parent company guarantees) for counterparties that do not meet an acceptable level of risk; and the use of standardized agreements, which allow for the netting of positive and negative exposures associated with a single counterparty.

As of June 30, 2018, the five financial natural gas hedge counterparties were rated by Moody's as follows: three at A3, one at A2, and one at A1. The counterparties were rated by S&P as follows: one at AA-, one at A, one at A-, and two at BBB+. As of June 30, 2017, the nine financial natural gas hedge counterparties were rated by Moody's as follows: one at Aa2, two at A3, one at A2, three at A1, one Baa1, and one WR. The counterparties were rated by S&P as follows: two at AA-, one at A+, one at A, two at A-, and three at BBB+.

Based on the International Swap Dealers Association agreements, the Power System or the counterparty may be required to post collateral to support the financial natural gas hedges subject to credit risk in the form of cash, negotiable debt instruments (other than interest-only and principal-only securities), or eligible letters of credit. Collateral posted is held by a custodian. As of June 30, 2018 and 2017, the fair values of the financial natural gas hedges are within the credit limits and collateral posting was not required.

(b) Basis Risk

The Power System is exposed to basis risk between the financial natural gas hedges, which are settled monthly at NW Rocky Mountains Index, and the hedged gas deliveries, which are daily spot purchases at Kern River, Opal prices. However, these pricing points are in the same region and are highly correlated.

(c) Termination Risk

The Power System or its counterparties may terminate the contractual agreements if the other party fails to perform under the terms of the contract. No termination events have occurred and there are no out-of-the-ordinary termination events contained in contractual documents.

(9) Long-Term Debt

Long-term debt outstanding as of June 30, 2018 and 2017 consists of revenue bonds and refunding revenue bonds due serially in varying annual amounts as follows (amounts in thousands):

(In thousands)

Bond issues	Date of issue	Effective interest rate%	Fiscal year of last scheduled maturity		Principal outstanding 2018	Principal outstanding 2017
Issue of 2001, Series B	06/05/01	Variable	2035	$	579,200	579,200
Issue of 2002, Series A	08/22/02	Variable	2036		334,700	334,700
Issue of 2002, Series C2	11/22/02	4.375	2018		—	5,119
Issue of 2004, Series C3	04/07/04	4.298	2020		4,230	4,232
Issue of 2006, Series C4	03/01/06	4.040	2022		3,106	3,204
Issue of 2007, Series A1	10/18/07	4.659	2040		—	12,215
Issue of 2008, Series A1	11/25/08	5.583	2039		—	200,000
Issue of 2008, Series A2	11/25/08	5.039	2033		—	252,240
Issue of 2009, Series A	02/19/09	4.773	2040		109,285	111,980
Issue of 2009, Series B	06/02/09	4.563	2025		171,590	171,590
Issue of 2010, Series A	06/02/10	3.898	2041		616,000	616,000
Issue of 2010, Series B	06/02/10	3.015	2023		28,470	28,470
Issue of 2010, Series C	08/25/10	2.188	2028		139,775	139,775
Issue of 2010, Series D	12/02/10	4.342	2046		760,200	760,200
Issue of 2011, Series A	06/30/11	2.715	2023		442,500	448,895
Issue of 2012, Series A	10/25/12	2.936	2036		100,355	100,355
Issue of 2012, Series B	10/25/12	4.164	2044		350,000	350,000
Issue of 2013, Series A	04/02/13	2.504	2032		456,390	498,200
Issue of 2013, Series B	06/04/13	3.347	2033		427,080	452,145
Issue of 2013, Series C	06/04/13	4.441	2038		27,855	27,855
Issue of 2014, Series A	05/06/14	Variable	2039		200,000	200,000
Issue of 2014, Series B	06/10/14	4.008	2044		322,000	322,000
Issue of 2014, Series C	08/05/14	2.912	2030		196,955	198,750
Issue of 2014, Series D	10/23/14	3.785	2045		450,000	450,000
Issue of 2014, Series E	01/08/15	3.833	2045		229,000	229,000
Issue of 2015, Series A	04/16/15	3.636	2041		520,280	520,280
Issue of 2015, Series B	10/01/15	1.179	2019		268,590	268,590
Issue of 2016, Series A	05/19/16	3.265	2047		275,000	275,000
Issue of 2016, Series B	06/23/16	3.259	2047		225,000	225,000
Issue of 2017, Series A	02/09/17	3.782	2048		500,000	500,000
Issue of 2017, Series B	04/04/17	3.666	2040		345,410	345,410
Issue of 2017, Series C	07/13/17	3.710	2048		375,000	—
Issue of 2018, Series A	04/19/18	3.357	2039		354,440	—
Total principal amount					8,812,411	8,630,405
Unamortized premiums and discounts					759,849	688,874
Revenue bonds, net					9,572,260	9,319,279
Revenue certificates					200,000	200,000
Bonds and revenue certificates due within one year (including current portion of variable rate debt)					(265,004)	(243,049)
				$	9,507,256	9,276,230

Revenue bonds generally are callable 10 years after issuance. The Power System has agreed to certain covenants with respect to bonded indebtedness. Significant covenants include the requirement that the Power Systems' net income, as defined, will be sufficient to pay certain amounts of future annual bond interest and of future annual aggregate bond interest and principal maturities. Revenue bonds and refunding bonds are collateralized by the future revenue of the Power System.

(a) Long-Term Debt Activity

The Power System had the following activity in long-term debt for the fiscal years ended June 30, 2018 and 2017 (amounts in thousands):

	Balance June 30, 2017	Additions	Reductions	Balance June 30, 2018
Revenue bonds:				
Principal:				
Beginning balance	8,630,402	—	—	8,630,402
Issuances	—	375,000	—	375,000
Refunding bonds	—	354,440	—	354,440
Scheduled maturities	—	—	(131,756)	(131,756)
Refunded/defeased bonds	—	—	(415,675)	(415,675)
	8,630,402	729,440	(547,431)	8,812,411
Premium (discount):				
Beginning balance	688,876	—	—	688,876
Issuances	—	70,125	—	70,125
Refunding bonds	—	64,819	—	64,819
Scheduled amortization	—	—	(69,614)	(69,614)
Written off due to refunding	—	5,643	—	5,643
	688,876	140,587	(69,614)	759,849
Revenue bonds, net	9,319,278	870,027	(617,045)	9,572,260
Revenue certificates	200,000	—	—	200,000
Total	9,519,278	870,027	(617,045)	9,772,260

(In thousands)

	Balance June 30, 2016	Additions	Reductions	Balance June 30, 2017
Revenue bonds:				
Principal:				
Beginning balance	8,334,507	—	—	8,334,507
Issuances	—	500,000	—	500,000
Refunding bonds	—	345,410	—	345,410
Scheduled maturities	—	—	(94,555)	(94,555)
Refunded/defeased bonds	—	—	(454,960)	(454,960)
	8,334,507	845,410	(549,515)	8,630,402
Premium (discount):				
Beginning balance	620,002	—	—	620,002
Issuances	—	88,322	—	88,322
Refunding bonds	—	55,032	—	55,032
Scheduled amortization	—	—	(62,408)	(62,408)
Written off due to refunding	—	—	(12,072)	(12,072)
	620,002	143,354	(74,480)	688,876
Revenue bonds, net	8,954,509	988,764	(623,995)	9,319,278
Revenue certificates	200,000	—	—	200,000
Total	9,154,509	988,764	(623,995)	9,519,278

(b) New Issuances

Fiscal Year 2018

In July 2017, the Power System issued $375 million of Power System Revenue Bonds, 2017 Series C. The net proceeds of $444.3 million, including an $69.3 million issue premium net of underwriter's discount, were deposited into the construction fund to be used for capital improvements.

In April 2018, the Power System issued $354.4 million of Power System Revenue Bonds, 2018 Series A. The net proceeds of $418.5 million, including a $64.1 million issue premium net of underwriter's discount, were used to refund all of the outstanding Power System Revenue Bonds, 2008 Series A, Subseries A-1, amounting to $200 million, and Subseries A-2, amounting to $215.7 million. The transaction resulted in a net present value savings of $85.8 million and a net loss for accounting purposes of $7.7 million, which was capitalized as deferred outflows on debt refunding and is being amortized over the life of the refunded bonds.

Fiscal Year 2017

In February 2017, the Power System issued $500 million of Power System Revenue Bonds, 2017 Series A. The net proceeds of $587.2 million, including an $87.2 million issue premium net of underwriter's discount, were deposited into the construction fund to be used for capital improvements.

In April 2017, the Power System issued $345.4 million of Power System Revenue Bonds, 2017 Series B. The net proceeds of $399.7 million, including a $54.3 million issue premium net of underwriter's discount, were used to refund a portion of the outstanding Power System Revenue Bonds, 2007 Series A, Subseries A-1, amounting to $213.5 million, and all of the $182.1 million outstanding Power System Revenue Bonds, 2007 Series A, Subseries A-2. The transaction resulted in a net present value savings of $60.1 million and a net gain for accounting purposes of $7.6 million, which was capitalized as deferred inflows on debt refunding and is being amortized over the life of the refunded bonds.

(c) Outstanding Debt Defeased

The Power System defeased certain revenue bonds in the current and prior years by placing cash and the proceeds of new revenue bonds in irrevocable trusts to provide for all future debt service payments on the old bonds. Accordingly, the trust account assets and the liability for the defeased bonds are not included in the Power System's financial statements.

At June 30, 2018, the following revenue bonds outstanding are considered defeased (amounts in thousands):

Bond issues		Principal outstanding
Second issue of 1993	$	5,520
Refunding issue of 1994		1,730
Issue of 1994		3,680
Issue of 2008 Series A, Subseries A-1		200,000
Issue of 2008 Series A, Subseries A-2		215,675
Issue of 2009 Series B		535
Issue of 2010 Series B		15
Issue of 2011 Series A		1,285
Issue of 2013 Series A		2,125
	$	430,565

(10) Variable Rate Bonds

In May 2017, the Power System entered into a First Amendment to Continuing Covenant Agreement (Amended CCA) with Wells Fargo Bank to extend the expiration date of the current Continuing Covenant Agreement (CCA) to May 4, 2020. In May 2014, the $200 million Power System Revenue Bonds, 2014 Series A (Power 2014A Bonds) were sold under the CCA in an index floating rate mode under a direct purchase structure. Under the Amended CCA, the Power 2014A Bonds will pay interest at a fixed spread of 23 basis points (0.23%) above the Securities Industry and Financial Markets Association Index for the three-year term. At the end of the three-year term, the Power System would have the option to either renegotiate and renew a new index floating rate term with Wells Fargo or another bank or convert the bonds to another mode, such as a fixed-rate mode or a traditional variable-rate mode, which utilizes a standby agreement.

As of June 30, 2018 and 2017, the Power System had $1.1 billion in variable rate bonds. The variable rate bonds currently bear interest at weekly and daily rates ranging from 0.45% to 1.5% as of June 30, 2018 and 0.50% to 0.91% as of June 30, 2017. The Power System can elect to change the interest rate period of the bonds with certain limitations. The bondholders have the right to tender the bonds to the tender agent on any business day with seven days' prior notice. The Power System has entered into standby and line-of-credit agreements with a syndicate of commercial banks in an initial amount of $579 million and $335 million to provide liquidity for the variable rate bonds. The extended standby agreements expire in February 2019 for the $206 million, January 2020 for the $106 million, and January 2021 for the $267 million, for a total of $579 million, and in May 2020 for the $335 million.

Under the agreements, the $579 million variable-rate bonds will bear interest that is payable monthly at the greatest of (a) the prime rate plus 1.00%; (b) the federal funds rate plus 2.00%; (c) LIBOR quoted rate plus 3.00%; (d) 7.00%; and (e) 7.50%, while the $335 million variable rate bonds will bear interest that is payable monthly at the greatest of (a) the prime rate plus 1.00%; (b) the federal funds rate plus 2.00%; and (c) 7.00%. The unpaid principal of each liquidity advance made by the liquidity provider is payable in 10 equal semiannual installments 90 days immediately following the related liquidity advance. At its discretion, the Power System has the ability to convert the outstanding bonds to fixed-rate obligations, which cannot be tendered by the bondholders.

The variable-rate bonds have been classified as long term in the statements of net position as the liquidity facilities give the Power System the ability to refinance on a long-term basis and the Power System intends to either renew the facility or exercise its right to tender the debt as a long-term financing. The portion that would be due in the next fiscal year in the event that the outstanding variable rate bonds were tendered and purchased by the commercial banks under the standby agreements has been included in the current portion of long-term debt and was $91 million at both June 30, 2018 and 2017.

(11) Revenue Certificates

As of June 30, 2018 and 2017, the Power System has outstanding $200 million of commercial paper bearing interest at an average rate of 1.45%. The commercial paper matures not more than 270 days from the date of issuance.

The Power System entered into a letter-of-credit and reimbursement agreement with a commercial bank in the amount of $200 million to provide liquidity and credit support for the Power System's commercial paper program. The agreement secures the payment when due of the principal and interest on commercial paper issued on or after July 1, 2016. Drawings on the agreement will represent advances to the Power System and will bear interest that is payable monthly at the highest of (a) the prime rate plus 1.00%; (b) federal funds rate plus 2.00%; and (c) 7.50%. The unpaid principal of each advance is payable in 10 equal semiannual installments, commencing on the date six months after the advance. The agreement terminates on June 28, 2019.

The revenue certificates have been classified as long-term debt in the statements of net position as the agreement gives the Power System the ability to refinance on a long-term basis, and the Power System intends to either renew the agreement or exercise its option to draw on the Agreement. The portion that would be due in the next fiscal year in the event that the outstanding revenue certificates were advanced by the commercial bank under the Agreement has been included in the current portion of long-term debt and was $20 million at both June 30, 2018 and 2017.

(12) Scheduled Principal Maturities and Interest

As of June 30, 2018, scheduled annual principal maturities and interest are as follows (amounts in thousands):

		Principal	Interest and amortization
Fiscal year(s) ending June 30:			
2019	$	153,615	346,735
2020		191,818	355,549
2021		208,575	350,562
2022		223,971	342,822
2023		240,354	334,530
2024–2028		1,427,766	1,510,400
2029–2033		1,735,970	1,191,771
2034–2038		1,562,744	892,148
2039–2043		1,861,035	500,751
2044–2048		1,181,565	75,460
Total requirements		8,787,413	5,900,728
Debt service payments already paid to sinking fund – 2010C bonds		24,998	—
	$	8,812,411	5,900,728

Interest and amortization are net of $746 million of unamortized discount/premium and gain/loss due to issuances of new and refunding bonds.

The schedule is presented assuming that the tender options on the variable rate bonds, as discussed on the previous page, will not be exercised and that the full amount of the revenue certificates will be renewed. Should the bondholders exercise the tender options and the Power System convert all of the revenue certificates under the line of credit, the Power System would be required to redeem the $1,314 million in variable rate bonds and revenue certificates outstanding over the next seven years, as follows: $111 million in fiscal year 2019, $223 million in fiscal year 2020, $263 million in each of the fiscal years 2021 through 2023, $151 million in fiscal year 2024, and $40 million in fiscal year 2026. Accordingly, the statements of net position recognize the possibility of the exercise of the tender options and reflect the $111 million that could be due in fiscal year 2019 as a current portion of long-term debt payable. Interest and amortization include interest requirements for variable rate bonds. Variable debt interest rate in effect at June 30, 2018 averages 1.137%.

(a) Line of Credit

The Power System entered into a revolving credit agreement (as amended, the Wells Fargo RCA) with Wells Fargo Bank, National Association (Wells Fargo), pursuant to which Wells Fargo has committed to make loans to the Power System in a principal amount not to exceed $500 million outstanding at any one time. The Department can request loans for Water System improvements, Power System improvements, and/or such other lawful purposes of the Department. Loans for Water System and Power System are payable from the Water Revenue Fund and Power Revenue Fund, respectively. As of June 30, 2018, the Power System has no obligations outstanding under the Wells Fargo RCA, which expires on December 14, 2018. The Power System anticipates entering into a new revolving credit agreement in December 2018.

(13) Retirement Plan

(a) Plan Description

The Department has a funded contributory retirement plan covering substantially all of its employees. The Water and Power Employees' Retirement Fund (the Plan) operates as a single-employer defined-benefit plan to provide pension benefits to eligible department employees. The Retirement Fund's assets are held in a special trust fund of the City. Plan benefits are generally based on years of service, age at retirement, and the employee's highest 12 consecutive months of salary before retirement. Active participants who joined the Plan on or after June 1, 1984 are required to contribute 6% of their annual covered payroll. Participants who joined the Plan prior to June 1, 1984 contribute an amount based upon an entry-age percentage rate. A new Tier 2 was added to the Plan and applies to members hired on or after January 1, 2014. Tier 2 plan participants are required to contribute 10% of their salary, and plan benefits are based on a three-year final average salary period.

Under the provisions of the City Charter, the Retirement Board of Administration (the Retirement Board) has the responsibility and authority to administer the Plan and to invest its assets. The Retirement Board members serve as trustees and must act in the exclusive interest of the Plan's members and beneficiaries. The Retirement Board has seven members: one member of the Retirement Board of Water and Power Commissioners, the general manager, the chief accounting employee, three employee members who are elected for three-year terms by active members of the Plan, and one retiree who is appointed by the Board of Water and Power Commissioners for a three-year term.

Plan amendments must be approved by both the Retirement Board and the Board. The Plan issues separately available financial statements on an annual basis. Such financial statements can be obtained from the Department of Water and Power Retirement Office, 111 North Hope, Room 357, Los Angeles, CA 90012.

(b) Benefits Provided

The Plan provides retirement benefits to eligible employees. Most employees of the Los Angeles Department of Water and Power become members of the Plan effective on the first day of biweekly payroll following employment or immediately following transfer from another city department. Members employed prior to January 1, 2014 are designated as Tier 1, and those hired on or after January 1, 2014 are designated as Tier 2 (unless a specific exemption applies to employee providing a right to Tier 1 status).

Tier 1 members are eligible to retire once they attain the age of 60 with 5 or more years of service or at age 55 with 10 or more years of service credit acquired in the last 12 years prior to retirement. A Tier 1 member with 30 years of service is eligible to retire regardless of age. Tier 2 members are eligible to retire once they attain the age of 60 with 10 or more years of service or at any age with 30 years of service. For both tiers, combined years of service between the Plan and the Los Angeles City Employees' Retirement System is used to determine retirement eligibility, and at least 5 years must be actual employment at the Department or City (not purchased). For both tiers, members receiving Permanent Total Disability benefits may retire regardless of age. For Tier 1, to be eligible for a Formula Pension, the employee must have worked or been paid disability four of the last 5 years immediately preceding eligibility to retire or while eligible to retire.

The Formula Pension benefit the member will receive is based upon the age at retirement, monthly average salary base, and years of retirement service credit. The Tier 1 Formula Pension is equal to 2.1% times years of service credit times monthly average salary base. In addition, members retiring after attaining age 55 with 30 years of service credit receive an increase in the benefit factor from 2.1% to 2.3%. A reduced early retirement benefit is paid for those members attaining age 55 with 10 years of service or any age (under 55) with 30 years of service. The reduction is 1.5% for each year of retirement age between 60 and 55 and 3.0% for each year of retirement before age 55.

Under Tier 2, there are various benefit factors that apply, as shown below:

- 2.0% at age 55 with 30 years of service credit
- 1.5% at age 60 with 10 years of service credit
- 2.0% at age 63 with 10 years of service credit
- 2.1% at age 63 with 30 years of service credit.

Reduced early retirement benefits are still available at any age (under 55) with 30 years of service, and the reduction factors are the same as Tier 1. Note that these reduction factors continue to include the reduction from age 60 to 55 and from 55 to age at retirement.

For Tier 1 members, the maximum monthly retirement allowance is 100% of monthly average salary base. For Tier 2 members, the maximum monthly retirement allowance is 80% of monthly average salary base. Under Tier 1, pension benefits are calculated based on the highest average salary earned during a 12-month period. Under Tier 2, pension benefits are calculated based on the average salary earned during a 36-month period.

The member may elect the full allowance or choose an optional retirement allowance. The full allowance provides the highest monthly benefit and up to a 50% continuance to an eligible surviving spouse or domestic partner. There are five optional retirement allowances the member may choose from. Each of the optional retirement allowances requires a reduction in the full allowance in order to allow the member the ability to provide various benefits to a surviving spouse, domestic partner, or named beneficiary.

(In thousands)

(c) Plan Membership

As of the June 30, 2017 and 2016 measurement dates for the June 30, 2018 and 2017 net pension liability, pension plan membership, which consisted of Water and Power System members, consisted of the following:

	2018	2017
Retired members or beneficiaries currently receiving benefits	9,272	9,265
Vested terminated members entitled to, but not yet receiving, benefits	1,648	1,612
Active members	9,806	9,348
Total	20,726	20,225

(d) Contributions

The Department contributes $1.10 for each $1 contributed by participants plus an actuarially determined annual required contribution as determined by the Plan's independent actuary. The required contributions are allocated between the Power System and the Water System based on the current-year labor costs.

Employer contribution rates are adopted annually based upon recommendations received from the Plan's actuary after the completion of the annual actuarial valuation. The average employer contribution rates for fiscal years 2018, 2017, and 2016 (based on the July 1, 2017, 2016, and 2015 valuations) were 44.62%, 45.25%, and 42.77% of compensation, respectively. The average member contribution rate for fiscal years 2018, 2017, and 2016 (based on the July 1, 2017, 2016, and 2015 valuations) was 6.83% of compensation. Most Tier 1 members contribute at 6% of compensation and all Tier 2 members contribute at 10% of compensation. Employer contributions in fiscal years 2018, 2017, and 2016 amounted to $296 million, $267 million, and $245 million, respectively.

(e) Net Pension Liability

At June 30, 2018 and 2017, the Power System reported a liability of $917 million and $1,493 million for its proportionate share of the net pension liability, respectively. The net pension liability was measured as of June 30, 2017 and 2016, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of the same dates. The Power System's proportion of the net pension liability was based on the Power System's projected compensation for the year following the measurement date, relative to the projected compensation for the same period for both the Water System and the Power System. At June 30, 2018, the Power System's proportion was 68.3% compared to 68.1% and 67.4% as of June 30, 2017 and 2016, respectively.

(In thousands)

(f) Actuarial Assumptions

The Department's net pension liability as of June 30, 2018 and 2017 was measured as of June 30, 2017 and 2016 using actuarial valuations as of July 1, 2017 and 2016, respectively. The actuarial assumptions used in the July 1, 2017 valuation were based on the results of an experience study for the period from July 1, 2012 through June 30, 2015. The actuarial assumptions used in the July 1, 2016 valuation were based on the results of an experience study for the period from July 1, 2012 through June 30, 2015. The following assumptions were applied to all periods included in the measurement for the July 1, 2017 and 2016 actuarial valuations:

Actuarial assumptions	2017	2016
Inflation	3.00%	3.00%
Salary increases	4.50%–10.00%	4.50%–10.00%
Investment rate of return	7.25%	7.25%
Cost-of-living adjustments	3.00% (Actual increases are contingent upon CPI increases, with a 3.00% maximum for Tier 1 and 2.00% maximum for Tier 2.)	3.00% (Actual increases are contingent upon CPI increases, with a 3.00% maximum for Tier 1 and 2.00% maximum for Tier 2.)
Mortality	Healthy postretirement: RP-2014 Healthy Annuitant Mortality Table set back one year with MP-2015 projection scale	Healthy postretirement: RP-2014 Healthy Annuitant Mortality Table set back one year with MP-2015 projection scale

(g) Discount Rate

The discount rate used to measure the pension liability was 7.25% as of both June 30, 2018 and 2017. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employee and employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments for current and inactive plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments, which is estimated to be 104 years, to determine the total pension liability at June 30, 2018 and 2017.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which the best estimate ranges of expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset proportionate share, adding expected inflation and subtracting expected investment expenses. The target allocation and projected best estimates of arithmetic real rates of return for each major asset class, after deducting inflation but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

	June 30, 2018 and 2017	
Asset class	Target allocation	Long-term expected real rate of return
Domestic equity	29%	5.76%
Developed international equity	19	7.25
Fixed income	25	1.74
Real estate	8	4.37
Real return	5	2.39
Private equity	8	7.75
Covered calls	5	3.50
Cash and cash equivalents	1	(0.46)
Total	100%	

(h) Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the Power System as of June 30, 2018 and 2017, calculated using the discount rate of 7.25%, as well as what the Power System's pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.25%) or one percentage point higher (8.25%) than the current rate (amounts in thousands):

Net pension liability	1% decrease (6.25%)	Current discount rate (7.25%)	1% increase (8.25%)
June 30, 2018	$ 2,090,307	916,758	(52,845)

Net pension liability	1% decrease (6.25%)	Current discount rate (7.25%)	1% increase (8.25%)
June 30, 2017	$ 2,632,821	1,492,508	550,428

(i) Pension Plan Fiduciary Net Position

The pension plan's fiduciary net position is determined based on the accrual basis of accounting, which is on the same basis of accounting as the Plan. Pension plan investments are recorded at fair value except for short-term investments, which are recorded at amortized cost. Benefit payments include costs as designated by the plan document, refunds of employee contributions due to terminations and member deaths, and administrative expenses.

(j) Pension Expense, Deferred Outflow of Resources, and Deferred Inflow of Resources

In addition to amortization expense of the regulatory asset discussed at Note 6, the Power System recognized pension expense of $165,984 and $214,407 for the years ended June 30, 2018 and 2017, respectively. Pension expense is recorded as operation and maintenance expense or construction work in progress, depending on where the related payroll is charged. At June 30, 2018 and 2017, the Power System reported $403,310 and $793,045, respectively, for deferred outflows of resources and deferred inflows of resources of $324,374 and $241,547, respectively.

The below tables summarize the deferred inflows of resources and deferred outflows of resources at June 30, 2018 and 2017 (amounts in thousands):

Deferred outflows of resources		June 30 2018	June 30 2017
Changes in proportion and differences between entity contributions and proportionate share of contributions	$	5,563	7,322
Net difference between projected and actual earnings on pension plan investments		—	231,908
Changes of assumptions and other inputs		397,747	553,815
Total deferred outflows of resources	$	403,310	793,045

Deferred inflows of resources		June 30 2018	June 30 2017
Changes in proportion and differences between entity contributions and proportionate share of contributions	$	3,343	5,538
Net difference between projected and actual earnings on pension plan investments		49,754	—
Difference between expected and actual experience in the total pension liability		271,277	236,009
Total deferred inflows of resources	$	324,374	241,547

In addition to the deferred outflows noted above, there are also $296,294 and $266,824 of deferred outflows related to pension contributions made after the measurement date as of June 30, 2018 and 2017, respectively. These deferred outflows of resources are recognized as a reduction of the net pension liability in the subsequent fiscal year.

(In thousands)

The net amount of deferred outflows of resources and deferred inflows of resources related to pensions that will be recognized in pension expense during the next five years and thereafter by the Power System is as follows:

Year		June 30 2018	2017
2018	$	—	61,173
2019		21,553	119,192
2020		85,741	183,245
2021		47,579	145,166
2022		(55,081)	42,722
2023		(20,856)	—
Total	$	78,936	551,498

(14) Other Postemployment Benefit Plans

(a) General Information About the Plan

As discussed in note 2, beginning with the year ended June 30, 2018, the Power System adopted the provisions of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. For the year ended June 30, 2017, the Power System followed GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, for financial reporting purposes.

The Department provides retirees medical and dental benefits and death benefits to active and retired employees and their dependents. The retiree healthcare plan and death benefit plan are administered by the Department and the Retirement Board, respectively. The Retirement Board and the Board of Commissioners have the authority to approve provisions and obligations. Eligibility for benefits for retired employees is dependent on a combination of age and service of the participants pursuant to a predetermined formula. Any changes to these provisions must be approved by the Retirement Board and the Board.

The retiree healthcare and death benefit plans are single-employer, defined-benefit plans. Plan assets are administered through irrevocable trusts for each fund used solely for the benefit of providing benefits to eligible participants in the Plan. Assets of the trust are legally protected from creditors and dedicated to providing postemployment reimbursement of eligible medical, dental, and vision expenses to current and eligible future retirees and their spouses in accordance with the terms of the Plan. Death benefits are provided to active and inactive employees in accordance with terms of the Plan.

The funds are administered in separate trust funds and presented as part of the retirement system financial statements. Such financial statements can be obtained from the Department of Water and Power Retirement Office, 111 North Hope, Room 357, Los Angeles, California 90012.

(b) Benefits Provided

For retiree healthcare, a medical subsidy is computed by a formula related to years of service and attained age of retirement. The subsidy limit is applied to the combined medial carrier and Medicare Part B premium but not the dental premium. For Tier 1, the monthly medical subsidy ranges from $30.32 to $1,630 depending on age and service at retirement. Tier 2, the monthly medical subsidy ranges from $30.32 to $815.27, depending on age and service at retirement. The monthly dental subsidy for most retirees is $37.85. The dental subsidy is not available to pay for premiums for married and surviving spouses or domestic partners. All members hired before January 1, 2014 are Tier 1. All members hired after January 1, 2014 are Tier 2.

The death benefit fund pays death benefits to the beneficiaries of eligible employees. Generally, to be eligible for the family death benefit allowance, an employee must be a full member of the Plan and contributing to the Plan at the time of death. If death occurs after retirement, the retired member must be receiving a monthly retirement allowance from the Plan and had a least five years of department service at retirement. The Family Death Benefit program pays a monthly allowance of $416 to the surviving spouse of a member with minor (or disabled) children plus $416 for each minor (or disabled) child up to a maximum monthly allowance of $1,170. In addition, the spouse's portion will not be paid if the spouse is receiving a survivor's optional death benefit allowance or an eligible spouse allowance from the retirement plan.

The Supplemental Family Death Plan which is part of the Death Benefit Fund is optional and subject to making additional member contributions. The Supplemental Family Death Benefit Plan pays a monthly allowance of $520 for each surviving spouse or child, in addition to the amounts payable from the Family Death Benefit Plan, subject to a maximum of $1,066 for the additional benefits. The insured lives death benefit plan for contributing members provides death benefits to employees that die while employed by the Department. Generally, to be eligible, an employee must be a full member of the Plan and contributing to the Plan at the time of death. The benefit paid from the death benefit fund is a single sum that is equal to the lesser of 14 times the member's monthly compensation with no maximum.

The insured lives death benefit plan for noncontributing members provides death benefits to employees that were employed by the Department for at least five years and death occurred after retirement. The death benefit is paid in a single sum that is equal to the lesser of 14 times the member's monthly full retirement allowance or $20,000.

(In thousands)

(c) *Employees Covered by Benefit Terms*

At the Department's measurement date of June 30, 2017, the following employees were covered by the benefit terms:

Plan Membership	Retiree healthcare	Death benefit
Beneficiaries currently receiving benefits	—	93
Retired members currently receiving benefits	8,038	7,113
Vested terminated members not receiving benefits	—	726
Active members	9,806	9,806
Total	17,844	17,738

(d) *Contributions*

The Retirement Board establishes rates for retiree healthcare plan based on an actuarially determined rate. For the year ended June 30, 2018, the Department's average contribution rate was 10.1% of covered-employee payroll. Employees are not required to contribute to the retiree healthcare plan. Power System contributions to the retiree healthcare plan were $60,154 including administrative expenses of $0.5 million for the fiscal year ended June 30, 2018.

The Department contributes to the death benefit plan based on actuarially determined contribution rates adopted by the board of administration. Employer contribution rates are adopted annually based on recommendations received from the Plan's actuary after the completion of the review of the death benefit fund. The employer and member contribution rates as of June 30, 2018 are as follows:

		Members	
	Department	Active	Retired
Family death benefit	$1.62 monthly per active member	N/A	N/A
Supplemental family death benefit insured lives	N/A	$2.25 biweekly	$4.9 monthly
Contributioning	$0.22 per $100 of payroll	$1.00 biweekly	N/A
Noncontributing	$11.05 per $100 of monthly retirement benefit	N/A	N/A

Power System contributions to the death benefits plan were $5,495 including administrative expenses of $0.6 million for the fiscal year ended June 30, 2018.

(e) *Net OPEB Liability*

(i) *For the Year Ended June 30, 2018 under GASB Statement No. 75:*

The Power System reported a liability of $379 million for its proportionate share of the net OPEB liability for retiree healthcare plan and the death benefit plan as of June 30, 2018. The net OPEB liabilities for each of the plans was measured as of June 30, 2017 and the total OPEB liability used to calculate the net OPEB liability was determined by actuarial valuations as of June 30, 2017. The Power System's proportion of the net OPEB liability was based on the Power System's projected compensation for the year following the measurement date, relative to the projected compensation for the same period for both the Water System and the Power System. At June 30, 2018, the Power System's proportion of the retiree healthcare plan and the death benefit plan net OPEB liabilities was 68.3% compared to 68.1% as of June 30, 2017.

The following table shows the Power System's proportionate share of the net OPEB liability for each of the plans as of June 30, 2018. (amounts in thousands):

		2018
OPEB liability for retiree healthcare plan	$	297,306
OPEB liability for death benefit plans		81,373
Net OPEB Liability	$	378,679

All assumptions are based on the results of an actuarial experience study for the period July 1, 2012 – June 30, 2016.

The total OPEB liability in the June 30, 2017 actuarial valuation used for the Power System's June 30, 2018 financial statements was determined using the following actuarial assumptions:

	Retiree Healthcare plan	Family Death Benefit	Supplemental Death Benefit	Insured Lives Benefit (Contributing Active Members)	Insured Lives Death Benefit (Non Contributing Members)
Cost method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age
Investment rate of return	7.25	3.5	3.5	3.5	3.5
Inflation rate	3	3	3	3	3
Real across the board salary increases	0.5%	0.5%	0.5%	0.5%	0.5%
Projected salary increase	4.50 to 10%	4.50 to 10%	4.50 to 10%	4.50 to 10%	4.50 to 10%
Mortality table	RP-2014 mortality table reflected for mortality experience as of the measurement date.	—	—	—	—
Medical cost trends:					
Non Medicare medical plan	7.00, graded down to 4.5% over 10 yrs.	—	—	—	—
Medicare medical plans	6.50, graded down to 4.5% over 8 yrs.				
Dental and Medicare Part B	4.5%				
Member contribution rate	None	None	$2.25 per bi-weekly period or $4.90 per month if retired.	$1.00 per biweekly payroll period.	None

(In thousands)

	Retiree Healthcare plan	**Family Death Benefit**	**Supplemental Death Benefit**	**Insured Lives Benefit (Contributing Active Members)**	**Insured Lives Death Benefit (Non Contributing Members)**
Department contribution rate	10.12%	$1.62 per month	Any additional funds necessary to fund the benefits.	$0.22 per $100 of payroll.	$1.05 per $100 of monthly retirement benefit.
Age and Service Requirement	**Tier 1** - Age 60 with 5 yrs of service; 55 with 10 yrs. of service in the last 12 years; any age with 30 yrs. of service; or receiving permanent total disability benefits from the Plan. **Tier 2** - age 60 with 10 yrs. of service; 55 with 30 years of service; or any age with 30 years of service.	Pre-retirement death of an active, full, contributing member at any age; or Post-retirement death of a member receiving a monthly retirement from WPERP with at least five years of service at retirement.	Pre-retirement death of an active, full, contributing member at any age; or Post-retirement death of a member receiving monthly retirement from WPERP.	Any age with six months of continuous service. Pre-retirement death of an active, full, contributing member to WPERP.	Death occurs after retirement and member was receiving a retirement monthly allowance from WPERP and had at least five years of service at retirement.
Per Capita Cost Development	The assumed per capita claims cost by age is calculated using age based factors for Retiree ranging from 90.3% to 123% and Spouse ranging from 71.1% to 122.6% and applying these factors to premiums. (Eligible spouses and survivors are not eligible for DWP dental subsidy)	—	—	—	—
Monthly benefit	Tier 1 - $30.32 to $1,630.53. Tier 2 $30.32 to $815.27.	$416 per month to each surviving child plus $416 per month to eligible spouse.	$520 per month to each surviving child plus $520 per month to eligible spouse.	A single sum distribution equal to 14 times monthly salary.	A single sum distribution equal to 14 times the member's full retirement allowance up to $20,000.
Participation rate	97% for medical and 95% for dental	—	—	—	—

Mortality rates were based on the RP-2014 Healthy Annuitant Mortality Table with no age adjustments for male or females and set back one year for females, projected generationally with the two-dimensional MP-2015 projection scale. The actuarial assumptions used in the June 30, 2017 valuation were based on the long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table for each fund:

(In thousands)

	Targeted allocation	Long-term expected arithmetic real rate of return
Retiree healthcare:		
Asset class	29 %	5.76 %
Domestic equity	19	7.25
International equity	25	1.74
Custom fixed income	8	4.37
Real estate	5	2.39
Real return	8	7.75
Private equity	5	3.50
	1	(0.46)
	100 %	

	Targeted allocation	Long-term expected arithmetic real rate of return
Death benefit:		
Fixed income	96 %	(0.82) %
Cash and cash equivalents	4	(0.46)
	100 %	

For the retiree healthcare fund, the discount rate used to measure the total OPEB liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that Department's contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected OPEB payments for current active and inactive employees. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

For the death benefit fund, the discount rate was determined to be 3.50% which is equivalent to the 20-year municipal bond rate. The fiduciary net position of this fund was not projected to cover all future benefit payments, and thus, the 20-year municipal bond rate was used to calculate the total OPEB liability.

(Continued)

(f) Sensitivity of Net OPEB Liability to Changes in the Discount Rate Rates

The following table represents the net OPEB liability of the Power System, calculated using the stated discount rate assumption as well as what the Power System's net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower or 1 percentage-point higher than the current discount rate (amounts in thousands):

		1% decrease	Current	1% increase
Discount rate		6.25 %	7.25 %	8.25 %
Net OPEB liability – Retiree healthcare plar	$	516,109	297,306	116,378
Discount rate		2.50 %	3.50 %	4.50 %
Net OPEB liability – Death benefit plan	$	96,065	81,373	69,617

(g) Sensitivity to Net OPEB Liability to Changes in Healthcare Cost Trend Rates

The following table represents the net OPEB liability of the Power System, calculated using the stated healthcare cost trend assumption as well as what the Power System's net OPEB liability would be if it were calculated using a healthcare cost trend that is one percentage point lower or one percentage point higher than the current healthcare cost trend rates (amounts in thousands):

		1% decrease	Current *	1% increase
Net OPEB liability – Retiree healthcare plan	$	91,891	297,306	571,778

* Current trend rates: 7.00% graded down to 4.50% over 10 years for non-Medicare medical plan costs; 6.50% graded down to 4.50% over 8 years for Medicare medical plan costs, and 4.50% for all years for dental and Medicare Part B subsidy costs

There is no trend rate assumption used in valuing the death benefit plan.

(h) OPEB Plan Fiduciary Net Position

Detailed information about the Plan's fiduciary net position is available in the separately issued plan financial report.

(i) OPEB Expense and Deferred Outflows and Inflows of Resources Related to OPEB for the year ended June 30, 2018

In addition to amortization expense of the regulatory asset discussed at Note 6, the Power System recognized OPEB expense of $41,835 and $6,015 for its proportionate share of the retiree healthcare and death benefits plans for the year ended June 30, 2018, respectively. At June 30, 2018, the Power

(Continued)

(In thousands)

System reported deferred outflows and inflows of resources related to OPEB Plans from the following sources:

	Retiree Healthcare Plan		Death Benefits Plan		Total	
	Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources
Change in proportion and differences between employer category's contributions	$ 1,861	—	128	—	1,989	—
Changes of assumptions	—	41,179	—	—	—	41,179
Net difference between projected and actual earnings on OPEB Plan Investments	—	52,469	564	—	564	52,469
Differences between expected and actual experience	—	26,021	73	—	73	26,021
	1,861	119,669	765	—	2,626	119,669
Employer contributions subsequent to the measurement date	60,154	—	5,495	—	65,649	—
Totals	$ 62,015	119,669	6,260	—	68,275	119,669

Contributions after the measurement date shown above will be recognized as a reduction of the net OPEB liability of the plans in the fiscal year ending June 30, 2019.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense in future reporting periods as follows:

	Retiree Healthcare Plan	Death Benefits Plan	Total
Year ended June 30:			
2019	$ (24,136)	175	(23,961)
2020	(24,136)	175	(23,961)
2021	(24,136)	175	(23,961)
2022	(24,136)	175	(23,961)
2023	(11,018)	34	(10,984)
Thereafter	(10,246)	31	(10,215)
	$ (117,808)	765	(117,043)

(j) Net OPEB Asset at June 30, 2017 and OPEB Expenses for the year ended June 30, 2017

The annual OPEB cost (expense) is calculated based on the employer's annual required contribution, an amount actuarially determined in accordance with the parameters of GASB Statement No. 45, Accoun*ting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. The annual required contribution represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost under each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed 30 years.

The following table shows the components of the Power System's share in annual OPEB cost for the year, the amount actuarially contributed to the Plan, and changes in the net OPEB asset (amounts in thousands):

		2017
Annual required contribution	$	68,086
Interest on net OPEB asset		(53,241)
Adjustment to annual required contribution		56,033
Annual OPEB costs		70,878
Department contributions made		(57,619)
Change in net OPEB asset		13,259
Net OPEB asset at beginning of year		(674,488)
Net OPEB asset at end of year	$	(661,229)

The Power System's share in the annual OPEB cost, the percentage of ARC contributed to the Plan, and the net retirement asset for fiscal year 2017 were as follows (amounts in thousands):

		2017
Annual OPEB cost	$	70,878
Percentage of OPEB costs contributed		81%
Net postemployment asset at end of year	$	661,229

(k) Funded Status and Funding Progress Based on Latest Actuarial Study

On October 3, 2017, the latest actuarial study as of July 1, 2017 was completed for fiscal year 2018. As of July 1, 2017, the Department's actuarial value of assets was $1.9 billion, and its actuarial accrued liability (AAL) for benefits was $2.35 billion, resulting in an unfunded actuarial accrued liability (UAAL) of $0.45 billion, which represents 81% funding status. The covered payroll (annual payroll of active employees covered by the Plan) was $992 million, and the ratio of the UAAL to the covered payroll was 45%.

On December 8, 2016, the actuarial study as of July 1, 2016 was completed for fiscal year 2017. As of July 1, 2016, the Department's actuarial value of assets was $1.7 billion, and its AAL for benefits was $2.33 billion, resulting in a UAAL of $0.58 billion, which represents 75% funding status. The covered payroll (annual payroll of active employees covered by the Plan) was $929 million, and the ratio of the UAAL to the covered payroll was 63%.

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 trend. Amounts determined regarding the funded status of the Plan and ARCs of the Department are subject to continual revision, as actual results are compared with past expectations, and new estimates are made for the future. The schedule of funding progress, presented as required supplementary information, presents information about whether the actuarial value of plan assets is increasing or decreasing over time, relative to the AAL for benefits.

(l) Actuarial Methods and Assumptions

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan understood by the Department and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the Department and the 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 AAL and the actuarial value of assets, consistent with the long-term perspective of the calculations. Benefits are a function of civil service credits and the retiree's age.

In the July 1, 2016 actuarial valuation, the entry age normal cost method was used. The actuarial assumptions include 7.25% discount rate, which represents the expected long-term return on plan assets and an annual healthcare cost trend rate of 6.50% initially, reduced by decrements to an ultimate rate of 5.00% over 6 years. Both rates include a 3.00% inflation assumption. The actuarial value of assets was determined using techniques that spread UAAL being amortized as a level percentage of projected payroll over a closed 30-year period, with 19 years remaining.

For the year ended June 30, 2017, there were participating 6,674 retirees, 3,476 spouses, and 9,806 active employees earning service credits in the Plan.

The ARC for fiscal year ended June 30, 2017 of $94 million is approximately 10.53% of covered payroll.

(m) Healthcare Reform Legislation

The Patient Protection and Affordable Care Act (PPACA) was signed into law on March 23, 2010. One key provision of the PPACA is the assessment of the excise tax on high-cost plans beginning in 2018. Under this act, a 40% excise tax applies to plans with costs exceeding certain annual thresholds for non-Medicare retirees aged 55–64 ($11,850 for single coverage, $30,950 for family coverage). For all other retirees, the thresholds in 2018 are $10,200 for single coverage and $27,500 for family coverage. Significant uncertainties exist regarding the impact of the excise tax on high-cost plans without further regulatory guidance. Management estimated the potential impact of this tax on the liability is based on unadjusted thresholds and assuming the tax is shared between the Department and its participants in the same way that the current costs are shared. The estimated impact of the 40% excise tax provision on high-cost plans beginning in 2018, under the healthcare reform, is reflected in all actuarial valuation reports after July 1, 2010.

(n) Disability Benefits

The Power System's allocated share of disability benefit plan costs and administrative expenses totaled $12 million and $10.3 million for fiscal years 2018 and 2017, respectively. Disability benefits are paid to active employees who qualify under the Plan's provisions and terminate with the employee's retirement.

(15) Other Long-Term Liabilities and Deferred Inflows

(a) Other Long-Term Liabilities and Deferred Inflows

The Power System has the following other long-term liabilities and deferred inflows (amounts in thousands):

	Balance, June 30, 2017	Additions	Reductions	Balance, June 30, 2018
Deferred inflows from regulated business activities:				
Rate stabilization	$ 100,000	—	—	100,000
Green Power Program	3,627	93	—	3,720
	$ 103,627	93	—	103,720
Accrued workers' compensation claims	$ 67,410	3,064	—	70,474
Derivative instrument liabilities	14,640	7,564	—	22,204

(In thousands)

	Balance, June 30, 2016	Additions	Reductions	Balance, June 30, 2017
Accrued liabilities	$ 1,887	—	(1,887)	—
Deferred inflows from regulated business activities:				
Rate stabilization	174,001	—	(74,001)	100,000
Green Power Program	3,224	403	—	3,627
	$ 177,225	403	(74,001)	103,627
Accrued workers' compensation claims	$ 61,945	5,465	—	67,410
Derivative instrument liabilities	23,379	—	(8,739)	14,640

(b) *Deferred Inflows from Regulated Business Activities*

The Power System has deferred inflows that are related to revenue collected from customers but have not been earned. These funds are deferred and recognized as costs related to these deferrals are incurred.

(i) *Rate Stabilization Account*

In April 2008, the City's council approved an amendment to the electric rate ordinance, which required the balance of the rate stabilization account to be maintained separately from the energy cost adjustment account. The ordinance also directed that the deferred amount within the energy cost adjustment account be the beginning balance of the rate stabilization account.

In August 2017, the Board passed resolutions setting the rate stabilization target at $100 million as of June 30, 2017, recognizing the amount above the $100 million in the rate stabilization account as other operating income and creating a rate stabilization fund to match the $100 million in the rate stabilization account. As of June 30, 2018 and 2017, the balance in the rate stabilization account was $100 million.

(c) *Accrued Workers' Compensation Claims*

Liabilities for unpaid workers' compensation claims are recorded at their net present value when they are probable of occurrence and the amount can be reasonably estimated. The liability is actuarially determined based on an estimate of the present value of the claims outstanding and an amount for claim events incurred but not reported based on the Power System's loss experience, less the amount of claims and settlements paid to date. The discount rate used to calculate this liability at its present value was 2.0% at June 30, 2018 and 2.0% at June 30, 2017. The Power System has third-party insurance coverage for workers' compensation claims over $600,000.

Overall indicated reserves for workers' compensation claims for both the Water System and the Power System, undiscounted, have increased from $115 million as of June 30, 2017 to $120 million as of June 30, 2018. This increase is mainly attributable to the number of open cases filed at the Power System. Workers' compensation claims typically take longer than one year to settle and close out. The entire discounted liability is shown as long term on the statements of net position as of June 30, 2018 and 2017.

Changes in the Power System's undiscounted liability since June 30, 2015 are summarized as follows (amounts in thousands):

		June 30		
		2018	**2017**	**2016**
Balance at beginning of year	$	115,104	103,699	95,379
Current year claims and changes in estimates		34,292	37,501	35,268
Payments applied		(29,370)	(26,096)	(26,948)
Balance at end of year	$	120,026	115,104	103,699

The Power System's portion of the discounted reserves as of June 30, 2018 and 2017 is $70 million and $67 million, respectively.

(16) Related Parties

(a) City of Los Angeles

Under the provisions of the City's charter, the Power System transfers funds at its discretion to the reserve fund of the City. Pursuant to covenants contained in the bond indentures, the transfers may not be in excess of the increase in net position before transfers to the reserve fund of the City of the prior fiscal year. Management believes such payments are not in lieu of taxes and are recorded as a transfer in the statements of revenue, expenses, and changes in net position. The Power System also reimburses the City for administrative and Office of Public Accountability costs incurred on behalf of the Power System. During fiscal year 2018, the Power System transferred $242 million in transfers and $27 million in administrative and Office of Public Accountability reimbursements to the City.

(b) Southern California Public Power Authority

SCPPA is a California Joint Powers Agency that finances the construction or acquisition of generation, transmission, and renewable energy projects. The Power System is a member of SCPPA and records its transactions as purchased power expense. See note 5 of the financial statements for a description of the purchased power commitments the Power System has with SCPPA.

(c) Intermountain Power Agency

IPA – The Intermountain Power Agency is an agency of the State of Utah established to own, acquire, construct, operate, maintain, and repair the Intermountain Power Project. The Power System serves as the project manager and operating agent of IPP. See note 5 for of the financial statements for a description of the financial activities of IPA.

(d) La Kretz Innovative Campus

The Power System has entered into a 50-year prepaid lease agreement for $12 million to lease an office building to the La Kretz Innovative Campus (LKIC), a 501(c)(3) nonprofit organization. LKIC prepaid the lease in fiscal year 2015, and the $12 million is amortized to other nonoperating income starting February 2016. LKIC, in turn, leases some of the work spaces in the building to assist energy innovation companies with the resources needed to validate energy-efficient technology. The Power System does have energy efficiency staff also located at the building to work with inventors and determine if there are new energy-efficiency programs to launch.

(17) Commitments and Contingencies

(a) Transfers to the Reserve Fund of the City of Los Angeles

Under the provisions of the City's charter, the Power System transfers funds at its discretion to the reserve fund of the City. Pursuant to covenants contained in the bond indentures, the transfers may not be in excess of the increase in fund net assets before transfers to the reserve fund of the City of the prior fiscal year. Such payments are not in lieu of taxes and are recorded as a transfer in the statements of revenue, expenses, and changes in fund net assets.

On September 14, 2017, the Los Angeles County Superior Court preliminarily approved a settlement of a class action lawsuit under which revenue collected under the 2016 Incremental Electric Rate Ordinance (the 2016 Ordinance) is precluded from being transferred to the reserve fund of the City. As of June 30, 2018, the Power System has billed approximately $52 million under the 2016 Ordinance that under-the-settlement agreement needs to be returned to customers' net of attorneys' fees and other administrative costs. Accordingly, for the fiscal year ended June 30, 2018, the Power System reduced retail revenue by the same $52 million and increased current accrued expenses accordingly. In October 2017, $52 million was placed in an escrow account for return to customers. Upon proof of such return, the Power System can request funds from the escrow account accordingly. Going forward, the 2016 Ordinance rates will be reduced through the variable energy cost adjustment so that no revenue for transfers is billed under the 2016 Ordinance.

During fiscal year 2018, the 2008 Electric Rate Ordinance (the 2008 Ordinance) and the 2016 Ordinance were in effect. Revenue from each ordinance is listed below as well as revenue from other sources, including contracts for wholesale energy and transmission revenue. The 12.628 cents under the 2008 Ordinance is determined based on the fiscal year's revenue billed and kilowatt hour (kWh) usage as of November 3, 2010. The 2008 Ordinance was the only ordinance in effect at that time.

(In thousands)

The following table relates to revenue billed to customers for the year ended June 30, 2018:

Revenue type	Basis of revenue	kWh	Rate per kWh under the 2008 ordinance	Revenue
Retail sales	The 2008 Ordinance	22,383,310	$ 0.12628	$ 2,826,564
Retail sales	The 2016 Ordinance	22,383,310		834,552
Wholesale sales	Contract			6,256
Transmission sales	Contract			74,918
Rent from electric property	Contract			1,451
Other service charges	Fee schedule			22,591
Unbilled sales	Estimated			70,885
Bad debt expense	Estimated			(32,996)
Total operating revenue				$ 3,804,221

The following table relates to revenue billed to customers for the year ended June 30, 2017:

Revenue type	Basis of revenue	kWh	Rate per kWh under the 2008 ordinance	Revenue
Retail sales	The 2008 Ordinance	22,490,122	$ 0.12628	$ 2,840,052
Retail sales	The 2016 Ordinance	22,490,122		577,330
Wholesale sales	Contract			40,869
Transmission sales	Contract			47,229
Rent from electric property	Contract			1,414
Other service charges	Fee schedule			19,536
Rate stabilization fund	Board action			74,000
Unbilled sales	Estimated			132,340
Bad debt expense	Estimated			(34,846)
Total operating revenue				$ 3,697,924

The Power System authorized total transfers of $242 million and $264 million in fiscal years 2018 and 2017, respectively, from the Power System to the reserve fund of the City.

(b) Asset Retirement Obligations

In accordance with federal guidelines, the Power System has $134 million in investments as of June 30, 2018 and 2017 to fund its portion of the decommissioning of PVNGS. As funds were collected through rates to finance this reserve, a decommissioning liability of $154 million and $153 million, respectively, as of June 30, 2018 and 2017 has been recorded as an increase in accumulated depreciation. The difference between investments and the liability for the decommissioning liability represent accumulated increases in fair value. Additional decommissioning funds may be needed in the future to decommission the Navajo Generating Station and other utility plant assets.

The Power System's current practice of recording asset retirement obligations as part of accumulated depreciation is consistent with industry practice. Next fiscal year, the Power System will adopt the provisions of GASB Statement No. 83. This statement addresses accounting and financial reporting for certain AROs. An ARO is a legally enforceable liability associated with the retirement of a tangible 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 of this statement.

(c) Environmental Matters

Numerous environmental laws and regulations affect the Power System's facilities and operations. The Power System monitors its compliance with laws and regulations and reviews its remediation obligations on an ongoing basis. The Power System follows GASB Statement No. 49, *Accounting and Financial Reporting for Pollution and Remediation Obligations*. This statement addresses accounting and financial reporting standards for pollution (including contamination) remediation obligations, which are obligations to address the current or potential detrimental effects of existing pollution by participating in pollution remediation activities, such as site assessments and cleanups. The scope of the statement excludes pollution prevention or control obligations with respect to current operations and future pollution remediation activities that are required upon retirement of an asset, such as landfill closure and postclosure care and nuclear power plant decommissioning. The Power System's obligations are included in accrued expenses on the statements of net position and were approximately $68 million and $38 million as of June 30, 2018 and 2017, respectively.

(d) Litigation

A number of claims and suits are pending against the Power System for alleged damages to persons and property and for other alleged liabilities arising out of its operations. In the opinion of management, any ultimate liability, which may arise from these actions, is not expected to materially impact the Power System's financial position, results of operations, or cash flows as of June 30, 2018.

(e) Risk Management

The Power System is subject to certain business risks common to the utility industry. The majority of these risks are mitigated by external insurance coverage obtained by the Power System. For other significant business risks, however, the Power System has elected to self-insure. Management believes that exposure to loss arising out of self-insured business risks will not materially impact the Power System's financial position, results of operations, or cash flows as of June 30, 2018.

(f) Credit Risk

Financial instruments, which potentially expose the Power System to concentrations of credit risk, consist primarily of retail and wholesale receivables. The Power System's retail customer base is concentrated on commercial, industrial, residential, and governmental customers located within the City. Although the Power System is directly affected by the City's economy, management does not believe significant credit risk exists as of June 30, 2018 except as provided in the allowance for losses. The Power System manages its credit exposure by requiring credit enhancements from certain customers and through procedures designed to identify and monitor credit.

(18) Subsequent Events

(a) Bond Sale

In November 2018, the Power System issued $240.8 million of revenue bonds, 2018 Series B. The net proceeds of $268.6 million, including a $27.7 million issue premium net of underwriter's discount, were used to refund all of the $268.6 million outstanding revenue bonds, 2015 Series B.

In November 2018, the Power System issued $59.1 million of revenue bonds, 2018 Series C. The net proceeds of $68.4 million, including a $9.3 million issue premium net of underwriter's discount, were deposited into the construction fund to be used for capital improvements.

In December 2018, the Power System plans to issue approximately $400 million of Power System Revenue Bonds, 2018 Series D. The proceeds of the debt will be used to refund the outstanding debt on the Power System 2009 Series A bonds in the amount of $106 million and to fund capital improvements.

Schedule of the Power System's Proportionate Share of the Net Pension Liability

Last 10 fiscal years*

(Amounts in thousands other than percentages)

		2018**	2017	2016	2015	2014
Power System's proportion of the collective net pension liability		68.252%	68.108%	67.397%	67.656%	67.427%
Power System's proportionate share of the collective net pension liability	$	916,758	1,492,508	771,121	860,748	1,207,513
Power System's covered-employee payroll		609,035	586,967	565,605	554,731	551,159
Power System's proportionate share of the collective net pension liability as a percentage of covered payroll		150.53%	254.27%	136.34%	155.16%	219.08%
Pension plan's fiduciary net position as a percentage of total pension liability		89.39%	82.17 %	89.80 %	88.41 %	82.30 %

* The Power System implemented GASB Statement No. 68 effective July 1, 2013; therefore, no information is available for the measurement periods prior to July 1, 2013.

** The measurement period for each year presented is on a one year lag and thus the measurement periods are June 30, 2013-2017 for the Power System's fiscal years of June 30, 2014-2018.

See accompanying independent auditors' report.

(Continued)

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Required Supplementary Information

June 30, 2018
(Unaudited)

Schedule of the Department's Pension Contributions *

Last 10 fiscal years

(Amounts in thousands other than percentages)

Reporting date for Power System June 30[1]		Actuarially determined contributions[2]	Contributions in relation to the actuarially required contributions [3]	Contributions deficiency (excess)	Power System's covered-employee payroll	Contributions as a percentage of covered employee payroll
2018	$	425,512,236	433,412,569	(7,900,333)	953,635,670	45.45 %
2017		403,780,319	391,717,359	12,062,960	892,331,196	43.90
2016		368,599,924	362,359,894	6,240,030	861,818,854	42.05
2015		387,464,759	376,902,022	10,562,737	839,213,254	44.91
2014		387,823,989	384,265,892	3,558,097	819,923,866	46.87
2013		376,667,610	368,426,348	8,241,262	817,421,028	45.07
2012		336,874,865	321,688,919	15,185,946	819,923,866	39.23
2011		304,431,910	286,699,384	17,732,526	791,760,493	36.21
2010		200,578,728	201,034,807	(456,079)	767,912,436	26.18
2009		141,291,588	145,941,275	(4,649,687)	696,704,083	20.95

(1) The measurement date under GASB Statement No. 68 is on a one-year lag.

(2) All actuarially determined contributions through June 30, 2014 were determined as the annual requirement under GASB Statements No. 25 and No. 27.

(3) Contributions do not include administrative expenses paid to the Plan.

* Information in this schedule was not separately available for the Power System.

See accompanying independent auditors' report.

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Required Supplementary Information

June 30, 2018
(Unaudited)

Schedule of Power System's Proportionate Share of the Net OPEB Liability – Retiree Healthcare Plan
Last 10 Fiscal Years
(In thousands)

Reporting Date of Employer	Measurement Date	Proportionate Share of Net OPEB Liability	Proportionate Share of Net OPEB Liability	Projected Compensation	Covered Payroll	Proportionate Share of the Net OPEB liability as a percentage of covered payroll	Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability
2018	2017	68.25 %	$ 297,306	$ 676,930	$ 609,035	48.82 %	81.44 %

See accompanying independent auditors' report.

(Continued)

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Required Supplementary Information

June 30, 2018
(Unaudited)

Schedule of Power System's Proportionate Share of the Net OPEB Liability- Death Benefit Plan
Last 10 Fiscal Years
(In thousands)

Reporting Date of Employer	Measurement Date	Proportionate Share of Net OPEB Liability	Proportionate Share of Net OPEB Liability	Projected Compensation	Covered Payroll	Proportionate Share of the Net OPEB liability as a percentage of covered payroll	Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability
2018	2017	68.25 %	$ 81,373	$ 676,930	$ 609,035	13.36 %	18.79 %

See accompanying independent auditors’ report.

Schedule of Department Contributions – Retiree Healthcare Plan*

Last 10 fiscal years

(Amounts in thousands other than percentages)

Reporting date for the Power System June 30		Actuarially determined contributions[1]		Contributions in relation to the actuarially required contributions [2]		Contributions deficiency (excess)		Power System's covered-employee payroll	Contributions as a percentage of covered employee payroll
2018	$	85,339	$	95,233	$	(9,894)	$	953,635	9.99 %
2017		93,920		90,310		3,610		892,332	10.12
2016		61,971		79,896		(17,925)		861,819	9.27
2015		70,748		78,497		(7,749)		839,214	9.35
2014		58,453		74,106		(15,653)		819,924	9.04
2013		36,908		67,563		(30,655)		817,421	8.27
2012		40,095		101,721		(61,626)		805,607	12.63
2011		66,188		140,133		(73,945)		791,760	17.70
2010		56,294		160,237		(103,943)		767,912	20.87
2009		58,718		159,413		(100,695)		696,704	22.88

(1) All actuarially determined contributions through June 30, 2016 were determined as the annual requirement under GASB Statements No. 43 and No. 45.

(2) Contributions do not include administrative expenses paid to the Plan.

* Information in this schedule was not separately available for the Power System.

See accompanying independent auditors’ report.

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Required Supplementary Information

June 30, 2018
(Unaudited)

Schedule of Department Contributions – Death Benefit Plan **

Last 10 fiscal years

(Amounts in thousands other than percentages)

Reporting date for the Power System June 30	Actuarially determined contributions[1]	Contributions in relation to the actuarially required contributions	Contributions deficiency (excess)	Power System's covered-employee payroll	Contributions as a percentage of covered employee payroll
2018	$ *	$ 5,496	$ *	$ *	*%
2017	7,138	7,138	—	892,332	0.80
2016	7,207	7,207	—	861,819	0.84

(1) Contributions do not include administrative expenses paid to the Plan.

* Information for 2018 was not available.

** Information in this schedule was not available separately for the Power System.

See accompanying independent auditors' report.

CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
POWER SYSTEM

Required Supplementary Information

June 30, 2018
(Unaudited)

Postemployment Healthcare Plan – Schedule of Funding Progress (GASB Statement No. 45)

The following schedule provides information about the Department's overall progress made in accumulating sufficient assets to pay benefits when due prior to allocations to the Water System and the Power System (amounts in thousands):

Actuarial valuation date July 1	Actuarial value of assets	Actuarial accrued liability	Unfunded AAL	Funded ratio	Covered payroll	UAAL as a percentage of covered payroll
2017	$ 1,898,137	$ 2,347,484	$ 449,347	81	$ 991,815	45%
2016	1,752,195	2,334,043	581,848	75	928,889	63

See accompanying independent auditors' report.