KPMG

DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES POWER SYSTEM

Financial Statements and
Required Supplementary Information

June 30, 2019 and 2018

(With Independent Auditors' Report Thereon)

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

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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 Department of Water and Power of the City of Los Angeles Power Revenue Fund (Power System), an enterprise fund of the City of Los Angeles, California, as of and for the years ended June 30, 2019 and 2018, and the related notes to the financial statements, 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 Department of Water and Power of the City of Los Angeles Power Revenue Fund as of June 30, 2019 and 2018, and the changes in its net 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, 2019 and 2018 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 2019, the Power System adopted the provisions of Governmental Accounting Standards Board Statement No. 83, *Certain Asset Retirement Obligations*, retroactive to July 1, 2017. Our opinion was 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 3–20 and the other required supplementary information on pages 103–108 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 26, 2019 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 26, 2019

The following discussion and analysis of the financial performance of the Department of Water and Power of the City of Los Angeles' Power Revenue Fund (the Power System) provides an overview of the financial activities for the fiscal years ended June 30, 2019 and 2018. 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 21.

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, 2019 and 2018. The statements of revenue, expenses, and changes in net position report all of the revenue and expenses during the fiscal years ended June 30, 2019 and 2018. 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, 2019 and 2018.

The following tables summarize the financial position and changes in net position of the Power System as of and for the fiscal years ended June 30, 2019, 2018, and 2017:

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

(Amounts in millions)

		June 30		
Assets and Deferred Outflows		**2019**	**2018 (a)**	**2017 (a)**
Utility plant, net	$	12,174	11,531	10,926
Restricted investments		639	602	593
Other noncurrent assets		2,284	2,685	3,045
Current assets		2,943	2,419	2,449
Deferred outflows		660	945	1,226
Total assets and deferred outflows	$	18,700	18,182	18,239
Net Position, Liabilities, and Deferred Inflows				
Net position:				
Net investment in capital assets	$	1,811	1,773	1,433
Restricted		916	883	1,484
Unrestricted		2,885	2,729	2,851
Total net position		5,612	5,385	5,768
Long-term debt, net of current portion		10,107	9,507	9,276
Other long-term liabilities		1,396	1,738	1,894
Current liabilities		1,062	991	942
Deferred inflows		523	561	359
Total liabilities and deferred inflows		13,088	12,797	12,471
Total net position, liabilities and deferred inflows	$	18,700	18,182	18,239

(a) Certain amounts were restated to reflect the adoption of Governmental Accounting Standards Board Statement No. 83, *Certain Asset Retirement Obligations* (GASB 83).

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

(Amounts in millions)

		Year ended June 30		
		2019	**2018**	**2017**
Operating revenues:				
Residential	$	1,376	1,266	1,180
Commercial and industrial		2,561	2,429	2,331
Sales for resale		112	91	88
Other		51	51	134
Uncollectible accounts		(28)	(33)	(35)
Total operating revenues		4,072	3,804	3,698
Operating expenses:				
Fuel for generation and purchased power		(1,561)	(1,413)	(1,458)
Maintenance and other operating expenses		(1,413)	(1,112)	(1,107)
Depreciation and amortization		(585)	(554)	(521)
Total operating expenses		(3,559)	(3,079)	(3,086)
Operating income		513	725	612
Nonoperating revenue (expenses):				
Investment income		94	32	22
Federal bond subsidies		34	34	33
Other nonoperating revenue, net		111	27	59
Debt expense, net		(350)	(340)	(317)
Total nonoperating revenue (expenses), net		(111)	(247)	(203)
Income before capital contributions and transfers		402	478	409
Capital contributions		58	42	32
Transfers to the reserve fund of the the City		(233)	(242)	(264)
Increase in net position		227	278	177
Beginning balance of net position		5,385	5,768	5,591
Cumulative effect of change in accounting for other postemployment benefits (OPEB)		—	(661)	—
Ending balance of net position	$	5,612	5,385	5,768

(Continued)

Assets

Utility Plant

During fiscal years 2019 and 2018, the Power System's net utility plant increased $643 million and $605 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 2019, depreciable utility plant additions totaled $767 million and construction work in progress (CWIP) expenditures totaled $351 million. Major CWIP additions/expenditures during the year included $35 million for Sylmar Converter Station AC filter replacement, $27 million for Substation Automation System, $18 million for 138kv Underground Transmission Cable replacement, $12 million for Design and Construction of Distribution Trunk Lines, $11 million to upgrade Valley – Rinaldi 230kv Transmission Lines 1 and 2, $11 million for new 230kv line between Haskell Canyon switching station and Sylmar switching station, $9 million for Owens Gorge flow restoration upgrades, $9 million for major inspection overhauls related to reliability program, and $8 million for customer station design and construction. $451 million in CWIP projects were transferred from CWIP to plant accounts. Transfers from CWIP included $149 million for construction of new Scattergood-Olympic 230KV cable line, $38 million for new construction and reliability replacement program of distribution stations, $41 million for the Sylmar Ground Return System Replacement Project, $41 million for 138kv underground transmission cable replacement, $29 million for Energy Storage Project at Beacon, and $27 million for replacement of Haiwee Power Plant Penstock. The completion of these large projects along with current year CWIP additions caused the balance in the CWIP account to decrease by $144 million.

Direct additions are mostly related to improvements in distribution infrastructure as part of the Power System Reliability Program (PSRP). Many of the Department'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, $508 million and $28 million were additions to distribution and transmission plant accounts, respectively. Major direct additions included $124 million for replacement of deteriorated poles and cross arms, $75 million for new business line customer facilities, $59 million for reliability replacement of 4.8KV and 34.5KV cables, $52 million for customer stations design and construction, $20 million for permanent electric service restorations, and $17 million for automatic reading meter installations.

The accumulated depreciation balance increased by a net of $346 million in fiscal year 2019, which included retirements of $81 million offset by annual depreciation of $427 million net of depreciation charged to shared services.

During fiscal year 2018, depreciable utility plant additions totaled $682 million and construction work in progress (CWIP) expenditures totaled $360 million. 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

(Continued)

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 Gramercy line 1 & 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 to $161 million.

Direct additions are mostly related to improvements in distribution infrastructure as part of the PSRP. Many of the Department's assets were installed between 1920 and 1970. The PRP 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 additions to distribution and transmission plant accounts, respectively.

Major direct additions included $131 million for replacement of deteriorated poles and cross arms, $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 meter reading installations, and $18 million for permanent electric service restorations.

The accumulated depreciation balance increased by a net of $438 million in fiscal year 2018, which included retirements of $1.5 million offset by annual depreciation of $440 million net of depreciation charged to shared services . The $154 million reserve for decommissioning cost for Palo Verde generating station was reclassed to liability with the adoption of GASB 83. .

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

(Continued)

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, 2019. 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).

Table 3 – 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 (1)	3,404 (4)	3,319 (4)
Large hydro	1 (2)	7	1,265	1,265
Renewables	62	208 (3)	455 (4)	300 (4)
Subtotal	67	244	5,124	4,884
Less payable to the California Department of Water Resources	—	—	(120) (5)	(53) (5)
Total	67	244	5,004	4,831

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

(2) Consists of the Castaic Plant which is undergoing modernization work which is scheduled to be completed during the calendar year 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 (CEC). Also included are microturbine units at the Lopez Canyon Landfill, Department-built photovoltaic solar installations, the Pine Tree Wind Project, and a local small hydro plant. Not included are the units that were upgraded at the Castaic Plant.

(4) Figure based on statistical modeling of likely output without consideration of weather conditions that may affect the ability of certain renewable resources to reach its dependable capacity.

(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.

Table 4 – Jointly Owned Facilities, Long-Term Purchase Commitments and Energy Entitlements

Type	Number of facilities (6)	Department's net maximum capacity entitlement (MWs)		Department's net dependable capacity entitlement (MWs)	
Coal – Intermountain Power Project	1	1,202	(1)	1,202	
Natural gas – Apex Generating Station	1	578		483	
Large hydro – Hoover Power Plant	1	496	(2)	282	
Nuclear – Palo Verde Nuclear Generating Station	1	387	(3)	380	
Renewables/distributed generation (DG)	39,503 (4)	2,413		759	(5)
Total	39,507	5,076		3,106	

(1) The Power System's Intermountain Power Project (IPP) entitlement is 48.6% of IPP's plant capacity of 1,800 MWs. An additional 18.2% 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 capacity of 2,075 MWs As of May 2019, low water levels, procedures relating to the operation of Lake Mead, and scheduled maintenance activities have reduced the Department's dependable capacity to approximately 282 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) Figure based on statistical modeling of likely output without consideration of weather conditions that may affect the ability of certain renewable resources to reach its dependable capacity.

(6) 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 and the assets purchased by SCPPA and related debt are on SCPPA's financial statements.

Other Noncurrent Assets and Deferred Outflows

During fiscal year 2019, other noncurrent assets had a net decrease of $401 million primarily due to a decrease in notes receivable of $168 million related to note principal payments received from IPA during the year, a decrease in regulatory assets associated with pension of $167 million, a decrease in regulatory assets associated with other postemployment benefits (OPEB) of $44 million, a decrease in under recovered costs of $30 million, a decrease of $13 million in regulatory assets primarily for costs related to energy efficiency programs, offset by an increase in restricted cash and cash equivalents of $20 million.

During fiscal year 2019, deferred outflows decreased approximately $285 million due primarily to a $159 million decrease in deferred outflows related to pension resulting from the actual earnings on plan investments being higher than projected and a net decrease of $98 million in deferred outflows related to the recognition of decommissioning expenses under GASB 83 connected to the planned Navajo plant closure, a decrease of $15 million in gas derivative instruments due to the maturity of natural gas hedges, a $14 million decrease in the year-over-year contributions made after the measurement date for pension, a decrease of $6 million for deferred outflows on debt refunding due to amortization of gains and losses on bond refinancing, offset by a $5 million increase in deferred outflows related to year-over-year contributions made after the measurement date for OPEB, and a $3 million increase in deferred outflows related to OPEB.

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 under recovered 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.

During fiscal year 2018, 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 actual income on plan investments being higher than projected income. 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.

(Continued)

Current Assets

During fiscal year 2019, current assets increased $524 million, or 22%. This increase is primarily comprised of a $391 million increase in unrestricted cash and cash equivalents and a $20 million increase in accrued unbilled revenue due to increases in operating revenue as a result of increased rates and consumption. Other increases and decreases included the following: a $42 million increase in restricted cash and cash equivalents, a $35 million increase in the current portion of long-term notes receivable due to higher scheduled note maturities, a $30 million increase in the current portion of under recovered costs due to less consumption than forecasted causing pass-through revenue to decrease below forecasted costs, a $5 million decrease in net accounts receivable due to increases in rates and consumption and a $11 million increase in other 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 a $98 million increase in the current portion of under recovered 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.

Liabilities and Net Position

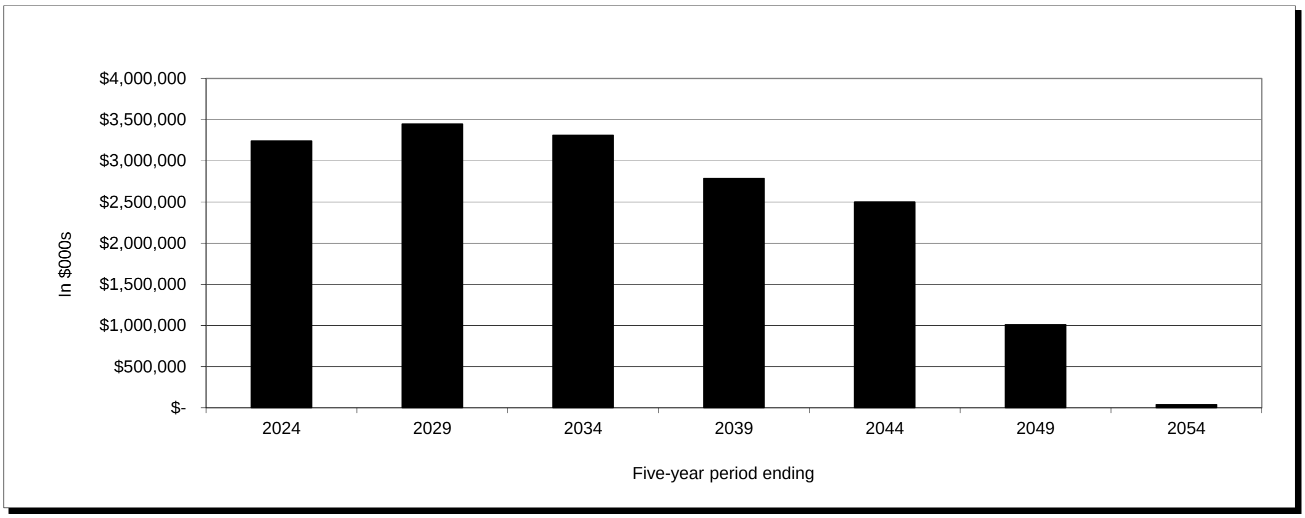
Long-Term Debt

As of June 30, 2019, the Power System's total outstanding long-term debt balance, including the current portion was approximately $10.4 billion. The increase of $598 million over the prior year's balance was due to five new debt issuances in FY 2019 totaling $1,345.9 million, $230.9 million in issue premiums, offset by scheduled maturities of $153.7 million, defeasance of $746.7 million in the Power System's revenue bonds, and $78.7 million in amortization on premiums and discounts. Two issues were to defease existing debt, two issues were to finance capital improvements, and one issue was used to defease debt and finance capital improvements.

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 amortization on premiums and discounts.

Outstanding principal, plus scheduled interest as of June 30, 2019, is scheduled to mature as shown in the chart below:

Chart: Debt Service Requirements



In addition, the Power System had $474.8 million and $460.6 million in restricted investments available for the use of debt reduction as of June 30, 2019 and 2018, respectively.

In March 2019, Moody's Investors Service affirmed the Power System's bond rating of Aa2. In August 2019, Fitch Ratings affirmed the Power System's bond rating of AA. Also, in September 2019, S&P Global Ratings affirmed the Power System's bond rating of AA. 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 a maximum annual adjusted 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 debt service. The Power System debt service coverage for fiscal year 2018 to 2019 was 2.40%.

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 proportionate share of the Department's net pension liability decreased $299 million from fiscal year 2018 to 2019 and decreased $576 million from fiscal year 2017 to 2018 due to the below pension activity:

Description		Fiscal year ended 2019	2018	2017
Beginning net pension liability	$	916,758	1,492,508	771,122
Pension expense		116,889	165,984	214,407
Employer contributions		(297,803)	(269,172)	(248,620)
New net deferred inflows/outflows		(96,398)	(411,259)	661,546
Recognition of prior deferred inflows/outflows		(21,436)	(61,303)	94,053
Ending net pension liability	$	618,010	916,758	1,492,508

For fiscal year 2019, the net pension liability decreased due to two primary factors: actual earnings from investments being 8.84% versus projected returns of 7.25% and changes in crediting rates from 7.5% to 7.25% for Tier 2 employee contributions. For fiscal year 2018, the decrease in pension liability was due to actual earnings from investments being 12% versus projected returns of 7.25%. 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 2019 and 2018.

OPEB

The Power System's proportionate share of the Department's net OPEB liability and related activity are shown below:

Description		Healthcare	Death benefit	Total
Beginning net OPEB liability at July 1, 2018	$	297,306	81,373	378,679
OPEB expense		25,862	5,882	31,744
Employer contributions		(65,574)	(5,494)	(71,068)
New net deferred inflows/outflows		(20,298)	(2,012)	(22,310)
Recognition of prior deferred inflows/outflows		23,097	(561)	22,536
Ending net OPEB liability at June 30, 2019	$	260,393	79,188	339,581

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

In fiscal year 2019, the OPEB liability decreased $39 million from the prior year due to a 9.08% return on plan investments versus projected earnings of 7.25%.

In fiscal year 2018, 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).

Other Long-term Liabilities and Deferred Inflows

During fiscal year 2019, other long-term liabilities decreased $342 million primarily due to a $299 million reduction of net pension liability, a $39 million reduction of net other postemployment benefits liabilities, a $15 million decrease in derivative instrument liability, a $14 million decrease in asset retirement obligation, offset by an increase of $25 million in estimated environmental remediation liabilities.

As discussed above, net pension and OPEB liabilities and the related inflows decreased from prior year due to actual investment returns being more than the projected 7.25% return. Asset retirement obligations decreased due to decommissioning costs of $20 million being paid in fiscal year 2019 related to Navajo Generating Station. Environmental liabilities increased due to new cost estimates being performed in the current year using industry specific cost software.

During fiscal year 2018, other long-term liabilities had a net decrease of $156 million primarily due to the recognition of the a $379 million net other postemployment benefits liability that resulted from the adoption of GASB 75, an increase of $30 million for estimated environmental remediation liability, an aggregate $8 million increase in derivative instruments, a $3 million increase in accrued workers' compensation claims, offset by a $576 million reduction of the net pension liability.

Also, during fiscal year 2018, deferred inflows had a net increase of $202 million and this was mainly driven by an increase of $80 million to deferred inflows related to pension and an increase of $120 million to deferred inflows related to net other postemployment benefits that resulted from the adoption of GASB 75.

Current Liabilities

During fiscal year 2019, current liabilities increased $71 million, or 7%, due to a $48 million increase in accounts payable and accrued expenses, a $21 million increase in accrued interest, an $11 million increase in accrued employee expenses, offset by a decrease of $7 million in securities lending obligations by the City and a $2 million decrease in the current portion of long-term debt.

During fiscal year 2018, current liabilities increased $49 million, or 5% due to 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, a $13 million increase in securities lending obligations by the City offset by a $3 million decrease in accounts payable and accrued expenses.

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 2019, 2018, and 2017:

Table 5 – Revenue and Percentage of Revenue by Customer Class

(Amounts in thousands)

	Fiscal year 2019		Fiscal year 2018		Fiscal year 2017	
	Revenue	**Percentage**	**Revenue**	**Percentage**	**Revenue**	**Percentage**
Type of retail customer:						
Residential	$ 1,376,341	35 %	$ 1,265,713	34 %	$ 1,179,514	33 %
Commercial and Industrial	2,560,098	64	2,429,322	65	2,331,599	64
Other, net	22,949	1	17,835	1	98,712	3
	3,959,388	100 %	3,712,870	100 %	3,609,825	100 %
Sales for resale	111,542		91,351		88,099	
Total revenue	$ 4,070,930		$ 3,804,221		$ 3,697,924	

While commercial customers consume the most electricity, residential customers represent the largest customer class. As of June 30, 2019, 2018, and 2017, the Power System had approximately 1.5 million customers. As shown in table 6 below, 1.4 million, or 91%, of total customers were in the residential customer class in fiscal years 2019, 2018, and 2017, respectively.

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

(Amounts in thousands)

	Fiscal year 2019		Fiscal year 2018		Fiscal year 2017	
	Number	**Percentage**	**Number**	**Percentage**	**Number**	**Percentage**
Type of retail customer:						
Residential	1,397	91 %	1,384	91 %	1,378	91 %
Commercial	116	8	114	8	113	8
Industrial	10	1	10	1	10	1
Other	6	—	7	—	7	—
	1,529	100 %	1,515	100 %	1,508	100 %

Fiscal Year 2019

Operating revenue increased $267 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. As result of the department's interim rate review required by the ordinance, the Base Rate Revenue Target has been reduced by 2% for fiscal year 2019 and 2% for fiscal year 2020. Under recovered costs of $342 million were recognized as revenue and will be billed during fiscal year 2020.

Fiscal Year 2018

Operating revenue increased $106 million due to a $76 million increase in base rate revenue from BRRTA. For fiscal year 2020 to 2021, and fiscal years thereafter, a BRRTA shall be established by the Board. Under recovered costs of $312 million were recognized as revenue and will be billed during fiscal year 2019.

Operating Expenses

Fuel for generation and purchased power are two of the largest 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 2019, 2018, and 2017:

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

(Amounts in thousands)

	Fiscal year 2019		Fiscal year 2018		Fiscal year 2017	
	Expense	**Percentage**	**Expense**	**Percentage**	**Expense**	**Percentage**
Type of expense:						
Fuel for generation	$ 296,506	8 %	$ 268,610	9	$ 292,557	9 %
Purchased power	1,264,133	36	1,143,535	37	1,165,303	38
Other operating expenses	1,079,358	30	799,074	26	829,347	27
Maintenance	333,392	9	313,389	10	277,771	9
Depreciation and amortization	585,231	17	554,354	18	521,220	17
	$ 3,558,620	100 %	$ 3,078,962	100 %	$ 3,086,198	100 %

Fiscal Year 2019

Fiscal year 2019 operating expenses were $480 million higher when compared to fiscal year 2018, driven primarily by a $280 million increase in other operating expenses, a $121 million increase in purchased power costs, a $31 million increase in depreciation and amortization expense, a $28 million increase in fuel for generation costs, and a $20 million increase in maintenance expenses.

The $280 million increase in other operating expenses is mainly due to the recognition of a $103 million decommissioning expense in fiscal year 2019 related to the announcement of the closure of Navajo Generating Station (see note 18b), an increase of $66 million in customer services and information expenses related to an increase in customer rebates for solar programs and energy efficiency programs, an increase of $36 million in customer accounting and collecting expenses connected to a reclass of CCB regulatory assets (Note 6), an increase of $41 million in distribution expenses, an increase of $29 million in transmission expenses, and a net $3 million increase in other expenses.

The $121 million increase in purchased power costs can be primarily attributed to an increase in renewable energy purchases connected to the Power System's continuing efforts in providing more environmentally friendly, renewable energy to its customers.

The $31 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 ($8 million), transmission plant ($5 million), and generation plant ($4 million).

The $28 million increase in fuel for generation costs is primarily due to higher natural gas prices, year over year.

The $20 million increase in maintenance expense for utility plant assets is mainly due to higher year-over-year maintenances costs for production plant ($11 million) and distribution plant ($9 million).

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).

(Continued)

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).

Nonoperating Revenue and Expenses

Fiscal Year 2019

The major nonoperating activities of the Power System for fiscal year 2019 included the transfer of $233 million to the City General Fund, investment income of $94 million, $34 million in federal bond subsidies, $111 million in other nonoperating income, and $350 million in debt expenses.

The $62 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 $84 million increase in other nonoperating income is due mainly due to an increase in the net sale of CO2 emission allowances which were recorded to other nonoperating income.

The $10 million increase in debt expenses is mainly due to the interest expense on new bonds issued during the fiscal year net of a year-over-year decrease in capitalized interest of $3 million.

The $15.9 million increase in capital contributions is mainly due to a year-over-year increases in amounts received from Metropolitan Transportation Authority (MTA) for various projects ($6.3 million), the City for Los Angeles International Airport projects ($4.9 million), and customers for various projects ($4.7 million).

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 CO2 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.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Statements of Net Position

June 30, 2019 and 2018

(Amounts in thousands)

Assets and Deferred Outflows		**2019**	**2018**
Noncurrent assets:			
Utility plant:			
Generation	$	6,090,845	5,987,567
Transmission		2,026,678	1,727,489
Distribution		9,579,922	9,012,299
General		2,025,892	1,848,581
Total		19,723,337	18,575,936
Accumulated depreciation		(8,434,447)	(8,088,454)
Total utility plant, net		11,288,890	10,487,482
Construction work in progress		676,237	820,472
Nuclear fuel, at amortized cost		42,406	41,528
Natural gas field, net		166,299	181,548
Total		12,173,832	11,531,030
Restricted investments		638,861	602,258
Cash and cash equivalents – restricted		339,126	318,455
Long-term notes receivables, net of current portion		262,027	429,764
Under recovered costs		95,670	125,649
Regulatory assets – other		885,901	898,696
Regulatory assets – pension		315,185	482,193
Regulatory assets – OPEB		386,123	430,072
Total noncurrent assets		15,096,725	14,818,117
Current assets:			
Cash and cash equivalents – unrestricted		1,142,128	751,164
Cash and cash equivalents – restricted		427,140	384,648
Cash collateral received from securities lending transactions		17,605	24,114
Customer and other accounts receivable, net of $178,600 and $208,933 allowance for losses for 2019 and 2018, respectively		315,766	320,279
Current portion of long-term notes receivable		159,309	123,545
Current portion of under recovered costs		341,775	311,646
Due from Water System		2,261	9,846
Accrued unbilled revenue		217,787	197,811
Materials and fuel		184,988	176,233
Prepayments and other current assets		134,564	119,814
Total current assets		2,943,323	2,419,100
Total assets		18,040,048	17,237,217
Deferred outflows on derivative instruments		7,015	22,206
Deferred outflows on debt refunding		21,759	27,363
Deferred outflows – asset retirement obligation		29,989	127,659
Deferred outflows – pension		243,002	403,310
Deferred outflows – OPEB		5,525	2,626
Deferred outflows – pension contributions made after measurement date		282,388	296,294
Deferred outflows – OPEB contributions made after measurement date		70,274	65,649
Total deferred outflows		659,952	945,107
Total assets and deferred outflows	$	18,700,000	18,182,324

(Continued)

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Statements of Net Position

June 30, 2019 and 2018

(Amounts in thousands)

Net Position, Liabilities, and Deferred Inflows		2019	2018
Net position:			
Net investment in capital assets	$	1,811,237	1,772,899
Restricted:			
Debt service		686,280	643,121
Other purposes		228,865	239,575
Unrestricted		2,885,471	2,729,311
Total net position		5,611,853	5,384,906
Long-term debt, net of current portion		10,106,782	9,507,256
Other noncurrent liabilities:			
Accrued workers' compensation claims		70,474	70,474
Asset retirement obligation		266,685	281,236
Net OPEB liability		339,581	378,679
Net pension liability		618,010	916,758
Other noncurrent liability		100,942	90,551
Total other noncurrent liabilities		1,395,692	1,737,698
Current liabilities:			
Current portion of long-term debt		263,296	265,005
Accounts payable and accrued expenses		420,592	372,755
Accrued interest		209,257	188,662
Accrued employee expenses		151,461	140,932
Obligations under securities lending transactions		17,605	24,114
Total current liabilities		1,062,211	991,468
Total liabilities		12,564,685	12,236,422
Deferred inflows on debt refunding		14,348	13,233
Deferred inflows – pension		281,901	324,374
Deferred inflows – OPEB		122,341	119,669
Deferred inflows from regulated business activities		104,872	103,720
Total deferred inflows		523,462	560,996
Total net position, liabilities, and deferred inflows	$	18,700,000	18,182,324

See accompanying notes to financial statements.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Statements of Revenue, Expenses, and Changes in Net Position

Years ended June 30, 2019 and 2018

(Amounts in thousands)

		2019	2018
Operating revenue:			
Residential	$	1,376,341	1,265,713
Commercial and industrial		2,560,098	2,429,323
Sales for resale		111,542	91,351
Other		50,911	50,830
Uncollectible accounts		(27,962)	(32,996)
Total operating revenue		4,070,930	3,804,221
Operating expenses:			
Fuel for generation		296,506	268,610
Purchased power		1,264,133	1,143,535
Maintenance and other operating expenses		1,412,750	1,112,463
Depreciation and amortization		585,231	554,354
Total operating expenses		3,558,620	3,078,962
Operating income		512,310	725,259
Nonoperating revenue:			
Investment income		94,217	32,135
Federal bond subsidies		33,723	33,580
Other nonoperating income		113,498	29,646
Total nonoperating revenue		241,438	95,361
Other nonoperating expenses		(2,226)	(2,702)
Total nonoperating revenue, net		239,212	92,659
Debt expenses:			
Interest on debt		355,433	348,264
Allowance for funds used during construction		(5,042)	(7,924)
Total debt expenses		350,391	340,340
Income before capital contributions and transfers		401,131	477,578
Capital contributions		58,373	42,460
Transfers to the reserve fund of the City of Los Angeles		(232,557)	(241,848)
Increase in net position		226,947	278,190
Net position:			
Beginning of year		5,384,906	5,767,946
Cumulative effect of change in accounting for postemployment benefits other than pensions, effective July 1, 2018		—	(661,230)
End of year	$	5,611,853	5,384,906

See accompanying notes to financial statements.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Statements of Cash Flows

Years ended June 30, 2019 and 2018

(Amounts in thousands)

		2019	2018
Cash flows from operating activities:			
Cash receipts:			
Cash receipts from customers	$	4,380,251	3,961,723
Cash collected from customers for other agency services		711,477	679,562
Cash receipts from interfund services provided		834,998	677,655
Cash disbursements:			
Cash payments to employees		(762,631)	(687,098)
Cash payments to suppliers		(2,113,161)	(1,931,532)
Cash payments for interfund services used		(1,004,569)	(909,214)
Cash payments to other agencies for fees collected		(711,280)	(675,764)
Other operating cash payments		(15,921)	(24,058)
Net cash provided by operating activities		1,319,164	1,091,274
Cash flows from noncapital financing activities:			
Payments to the reserve fund of the City of Los Angeles		(232,557)	(241,848)
Interest paid on noncapital revenue bonds		(6,323)	(5,946)
Net cash used in noncapital financing activities		(238,880)	(247,794)
Cash flows from capital and related financing activities:			
Additions to plant and equipment, net		(1,182,253)	(1,100,185)
Capital contributions		57,741	44,579
Principal payments and maturities on long-term debt		(153,615)	(131,756)
Proceeds from issuance of bonds and revenue certificates		828,123	445,126
Debt interest payments		(399,553)	(399,872)
Federal bond subsidies		33,723	33,580
Net cash used in capital and related financing activities		(815,834)	(1,108,528)
Cash flows from investing activities:			
Purchases of investment securities		(741,483)	(758,995)
Sales and maturities of investment securities		713,425	746,712
Proceeds from notes receivable		123,545	48,512
Investment income		94,190	29,381
Net cash provided by investing activities		189,677	65,610
Net change cash and cash equivalents		454,127	(199,438)
Cash and cash equivalents:			
Beginning of year		1,454,267	1,653,705
End of year	$	1,908,394	1,454,267

(Continued)

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Statements of Cash Flows

Years ended June 30, 2019 and 2018

(Amounts in thousands)

		2019	2018
Reconciliation of operating income to net cash provided by operating activities:			
Operating income	$	512,310	725,259
Adjustments to reconcile operating income to net cash provided by operating activities:			
Depreciation and amortization		585,231	554,354
Depletion expense		15,439	16,618
Amortization of nuclear fuel		12,143	13,185
Provision for losses on customer and other accounts receivables		27,962	32,996
Changes in assets and liabilities:			
Customer and other accounts receivable		(22,906)	(7,768)
Accrued unbilled revenue		(19,976)	(2,978)
Underrecovered costs		29,979	29,979
Current portion of underrecovered costs		(30,129)	(97,734)
Materials and fuel		(8,755)	(6,168)
Regulatory assets		138,908	(511,058)
Due from Water System		7,585	(1,244)
Deferred outflows		264,361	164,330
Accounts payable and accrued expenses		64,311	(12,859)
Net pension liability		(298,748)	(575,750)
Net OPEB liability		(39,098)	378,679
Other noncurrent liability		25,580	30,303
Deferred inflows		(37,532)	202,497
Asset retirement obligation		(14,551)	281,236
Prepayments and other		107,050	(122,603)
Net cash provided by operating activities	$	1,319,164	1,091,274

Supplemental disclosures of noncash capital and relating financing activities:

During the year ended June 30, 2019, the Power System issued capital bonds to refund previously issued debt. The $278.9 million of proceeds were deposited immediately into an irrevocable trust for the defeasance of $278.1 million of debt. Additionally, $468.6 million of proceeds were deposited immediately to a paying agent for the redemption of $468.6 million of debt. The net gain on refunding, after the write-off of previously recorded unamortized premiums, resulted in $2.9 million, which will be amortized over the debt repayment period and recorded as a deferred inflow.

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.

		2019	2018
Accounts payable related to capital expenditures	$	90,010	115,483

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, 2019 and 2018, 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.

(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 2017 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% for both fiscal years ended 2019 and 2018. Amortization periods of regulatory assets are discussed in note 6.

(g) 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.

(h) 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 2019 and 2018, the Power System recorded $15.4 million and $16.6 million of depletion expense, respectively.

(i) 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.

(Continued)

At June 30, 2019 and 2018, restricted cash and cash equivalents include the following (amounts in thousands):

		June 30	
		2019	**2018**
Bond redemption and interest funds	$	384,525	345,602
Other restricted funds		42,615	39,046
Cash and cash equivalents – current portion		427,140	384,648
Self-insurance funds		202,856	192,886
Rate Stabilization fund		100,000	100,000
Bond redemption funds		36,198	25,569
Construction funds		72	—
Cash and cash equivalents – noncurrent		339,126	318,455
Total restricted cash and cash equivalents	$	766,266	703,103

(j) 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 bimonthly, 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 an analysis of the balances in the Power System's accounts receivable 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 nonelectric customer billings as a reduction to related operating revenue in the Power System.

At June 30, 2019 and 2018, customer and other accounts receivable include the following (amounts in thousands):

		June 30	
		2019	**2018**
Customer accounts receivable	$	421,305	476,694
Allowance for losses		(163,000)	(198,233)
Customer accounts receivable		258,305	278,461
Other receivables		73,061	52,518
Allowance for losses, other		(15,600)	(10,700)
Other receivables		57,461	41,818
Total customer and other accounts receivable	$	315,766	320,279

(k) 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.

(l) 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.

(m) 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. 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)

(n) 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, 2019 and 2018:

		June 30	
		2019	**2018**
Type of expenses:			
Accrued payroll	$	59,556	54,895
Accrued vacation		54,736	52,224
Accrued sick leave		14,566	13,583
Compensatory time		22,603	20,230
Total	$	151,461	140,932

(o) 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.

(p) Accrued Workers' Compensation Claims

Liabilities for unpaid workers' compensation claims are recorded at their net present value. See note 16(c).

(q) 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 $235 million and $205 million as of June 30, 2019 and 2018, 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.

(r) 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.

(s) 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, 2019 and 2018, the average AFUDC rates were 3.51% and 3.71%, respectively.

(t) 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.

(u) 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.

(v) Other Retirement Plan Benefits

Eligible employees of the Power System are members of 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.

(w) Reclassifications

Certain reclassifications have been made to 2018 amounts to conform to the 2019 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

The Power System adopted the provisions of Statement No. 75 in fiscal year 2018. This statement replaced 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. Accordingly, the cumulative effect of the impact on net position was $(661,230) which was reflected in the prior year financial statements.

(b) 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. The Power System adopted the provisions of Statement No. 83 in fiscal year 2019 retroactive to July 1, 2017. The Power System's net position was not restated as a result of adoption of this standard. See note 18b.

(c) 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.

(d) 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.

(e) GASB Statement No. 88

In March 2018, the GASB issued Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placement.* The Power System adopted the provisions of Statement 88 in fiscal year 2019 retroactive to July 1, 2017. 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. The Power System's net position was not restated as a result of adoption of this standard. See additional required disclosures at note 11.

(f) 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. The Power System is evaluating the impact of this Statement on their financial statements.

(3) Utility Plant

The Power System had the following activities in utility plant during fiscal year 2019 (amounts in thousands):

	Balance June 30, 2018	Additions	Retirements and disposals	Transfers	Balance June 30, 2019
Nondepreciable utility plant:					
Land and land rights	$ 221,719	10,300	—	—	232,019
Construction work in progress	820,472	351,199	(44,729)	(450,705)	676,237
Nuclear fuel	41,528	13,021	(12,143)	—	42,406
Natural gas field	181,548	189	(15,438)	—	166,299
Total nondepreciable utility plant	1,265,267	374,709	(72,310)	(450,705)	1,116,961
Depreciable utility plant:					
Generation	5,916,210	61,576	(2,181)	40,711	6,016,316
Transmission	1,645,198	28,679	(750)	271,143	1,944,270
Distribution	8,969,584	508,121	(50,024)	109,527	9,537,208
General	1,823,225	168,927	(27,952)	29,324	1,993,524
Total depreciable utility plant	18,354,217	767,303	(80,907)	450,705	19,491,318
Accumulated depreciation:					
Generation	(2,431,131)	(102,923)	2,181	—	(2,531,873)
Transmission	(561,413)	(38,005)	750	—	(598,668)
Distribution	(4,079,476)	(228,862)	50,024	—	(4,258,314)
General	(1,016,434)	(57,110)	27,952	—	(1,045,592)
Total accumulated depreciation	(8,088,454)	(426,900)	80,907	—	(8,434,447)
Total utility plant, net	$ 11,531,030	715,112	(72,310)	—	12,173,832

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	(2,303,619)	(128,687)	1,175	—	(2,431,131)
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	(7,650,201)	(439,783)	1,530	—	(8,088,454)
Total utility plant, net	$ 10,926,130	634,705	(29,805)	—	11,531,030

Depreciation and amortization expense during fiscal years 2019 and 2018 was $585.2 million and $554.4 million, respectively. Depreciation and amortization expense on the statements of revenue, expenses, and changes in net position and cash flows includes amortization expense on software and regulatory assets, which is not included in additions to accumulated depreciation above.

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 Financial Reporting Entity*. As of June 30, 2019 and 2018, 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):

			Utility plant in service June 30, 2019		Utility plant in service June 30, 2018	
	Ownership interest	Share of capacity (MWs)	Cost	Accumulated depreciation	Cost	Accumulated depreciation
Palo Verde Nuclear Generating Station	5.7%	224	$ 603,203	419,957	598,434	412,775
Mohave Generating Station	30%	—	3,409	229	3,408	229
Pacific Intertie DC Transmission Line	40%	1,240	235,276	85,544	190,174	81,045
Other transmission systems	—	Various	118,918	71,450	112,929	68,718
			$ 960,806	577,180	904,945	562,767

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.

(In thousands)

(5) Purchased Power Commitments

As of June 30, 2019, 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 to cover debt service on these facilities through 2044 when the debt is repaid:

	The Power System's interest in agency's share								
	Agency	Agency share	Interest	Capacity			Principal payments	Interest payments/ (receipts)	Total
Intermountain Power Project	IPA	100%	63.7	1,170		$	269,356	(10,051)	259,305
Mead-Adelanto Transmission Project	SCPPA	68.0	48.9	539			37,192	8,565	45,757
Mead-Phoenix Transmission Project	SCPPA	17.8–22.4	50.4	647			22,750	6,454	29,204
Southern Transmission Project	SCPPA	100.0	59.5	1,429			253,642	46,315	299,957
Milford Wind I	SCPPA	100.0	92.5	185			154,938	50,694	205,632
Windy Point	SCPPA	100.0	100.0	262	*		364,175	119,352	483,527
Linden Wind Energy Project	SCPPA	100.0	100.0	50	*		109,870	58,200	168,070
Milford Wind II	SCPPA	100.0	100.0	102	*		119,135	44,979	164,114
Apex Power Project	SCPPA	100.0	100.0	520			281,170	151,657	432,827
Total						$	1,612,228	476,165	2,088,393

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

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. IPP is considered a related party. See note 17.

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. SCPPA is considered a related party. See note 17.

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 $702 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 $994 million and $905 million in fiscal years 2019 and 2018, 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.

(In thousands)

The Power System is reimbursed for services provided to IPP under the IPP project manager and operating agent agreements totaling $41 million and $29 million in fiscal years 2019 and 2018, 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 and 2005, the Power System restructured a portion of this obligation by transferring a total of $1.28 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. IPA used the proceeds from these transactions to defease and tender various bonds.

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 $421 million and $553 million as of June 30, 2019 and 2018, 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:		
2020	$	159,309
2021		155,920
2022		68,365
2023		74,425
2024		6,303
		464,322
Unamortized discount		(42,986)
		421,336
Less current portion		(159,309)
Noncurrent portion	$	262,027

(b) Energy Entitlement Contracts

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 Power plant. 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 for both June 30, 2019 and 2018. 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 Power plant 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.

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, 2019, 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	$ 9.1	2025
Don A Campbell I	SCPPA	100.0	84.6	13.7	12.8	2033
Don A Campbell II	SCPPA	100.0	100.0	16.2	11.2	2035
Copper Mountain Solar 3	SCPPA	100.0	84.0	210.0	47.1	2040
Heber 1 Geothermal	SCPPA	100.0	66.7	41.7	18.0	2025
Springbok 1 Wind Farm	SCPPA	100.0	100.0	105.0	19.9	2040
Springbok 2 Wind Farm	SCPPA	100.0	100.0	155.0	23.8	2045
Ormat Northern Nevada	SCPPA	100.0	100.0	150.0	42.0	2042
Ormesa	SCPPA	100.0	85.7	30.0	15.8	2042
ARP-Loyalton Biomass	SCPPA	66.6	74.1	8.9	1.9	2043
Springbok 3 Wind Farm	SCPPA	100.0	100.0	90.0	1.5	
Total purchase power costs under entitlement agreements					$ 203.1	

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.

(Continued)

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, 2019, 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	184,800 Mwh	$ 56.75-65.52	07/01/2019	09/30/2019	$ (1,333)	—

As of June 30, 2018, 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 paid at inception
Forward contracts:						
Electricity	249,600 Mwh	$ 33.92-45.25	07/01/2018	09/30/2018	$ 1,799	—

(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 deferred inflows:

Description		June 30, 2018	Additions	Reductions	June 30, 2019
Assets:					
(a) Underrecovered costs – long term	$	125,649	—	(29,979)	95,670
(b) Regulatory assets – legal settlements		96,000	—	(16,000)	80,000
(c) Regulatory assets – solar incentive program		215,124	2,022	(13,725)	203,421
(d) Regulatory assets – energy efficiency program		487,181	153,976	(70,267)	570,890
(e) Regulatory assets – customer care and billing system		100,391	—	(68,801)	31,590
Regulatory assets – other		898,696	155,998	(168,793)	885,901
(f) Regulatory assets – pension		482,193	—	(167,008)	315,185
(g) Regulatory assets – OPEB		430,072	—	(43,949)	386,123
Total regulatory assets – noncurrent		1,936,610	155,998	(409,729)	1,682,879
(h) Under recovered costs – current		311,646	30,129	—	341,775
Total regulatory assets	$	2,248,256	186,127	(409,729)	2,024,654
Deferred inflows:					
(i) Deferred inflows from business activities	$	103,720	1,152	—	104,872
Total regulatory deferred inflows	$	103,720	1,152	—	104,872

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
Deferred inflows:					
(i) Deferred inflows from business activities	$	103,627	93	—	103,720
Total regulatory deferred inflows	$	103,627	93	—	103,720

(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 programs, per SB1, concluded at the end of calendar year 2018. Some payments for these incentives were processed in 2018 and 2019.

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, 2019, 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.

During fiscal year 2019, the Power System management determined certain costs originally capitalized as a regulatory asset were not expected to move forward for regulatory asset rate recovery. As a result, $68,801 was removed from regulatory assets and reclassified as operating expenses or general plant assets based on the expenditure. Remaining costs in CC&B regulatory asset relate to training costs on the system and will be recovered through future rates.

(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 $167,008 and $132,657 for the years ended June 30, 2019 and 2018, 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, less the calculated balance of OPEB deferred outflows for contributions after the measurement date. 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 $43,949 and $21,110 for the year ended June 30, 2019 and 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 pass-through 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 net amount 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 $341,775 and $311,646 in current under recovered costs for the years then ended June 30, 2019 and 2018.

(Continued)

(In thousands)

(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, 2019, the Power System did not recognize any of this revenue. The Power System has $104,872 and $103,720 in these accounts at June 30, 2019 and 2018. For the years ended June 30, 2019 and 2018, the Power System did not recognize any revenue related to any of these accounts.

(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	
		2019	**2018**
Restricted and other investments:			
Restricted investments:			
Debt reduction funds	$	474,814	460,613
Nuclear decommissioning funds		140,699	134,004
Natural gas fund		21,014	5,366
Hazardous waste treatment fund		2,334	2,275
Total restricted investments	$	638,861	602,258

The Power System also has $17.6 million and $24.1 million of cash collateral received from securities lending transactions in the City's securities lending program as of June 30, 2019 and 2018, respectively.

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

(i) Debt Reduction Funds

The debt reduction funds were established to provide for funding of 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. 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. See note 5.

(ii) 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 18(b).

(iii) 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.

(iv) 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, 2019 and 2018, the Power System's restricted investments and their maturities are as follows (amounts in thousands):

		Investment maturities				
2019 investment type	**Fair value**	**1 to 30 days**	**31 to 60 days**	**61 to 365 days**	**366 days to 5 years**	**Over 5 years**
U.S. government securities	$ 27,930	4,997	—	19,932	3,001	—
U.S. agencies	220,208	8,125	16,608	74,336	99,481	21,658
Supranationals	36,197	4,996	100	19,906	11,195	—
Medium-term corporate notes	159,408	16	—	48,295	111,097	—
Commercial paper	36,721	12,987	14,704	9,030	—	—
Certificates of deposit	41,067	17,628	7,503	15,936	—	—
Bankers acceptances	1,827	1,827	—	—	—	—
California local agency bonds	33,397	5,000	15,546	2,000	10,851	—
California state bonds	24,976	—	—	7,494	17,482	—
Other state bonds	36,109	750	—	20,053	15,306	—
Money market funds	21,021	21,021	—	—	—	—
	$ 638,861	77,347	54,461	216,982	268,413	21,658

		Investment maturities				
2018 investment type	**Fair value**	**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

(v) *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.

(vi) *Credit Risk*

Under its investment policy and the California 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, 2019, $206,993 (94%) was rated with either the highest or second highest possible credit ratings by the Nationally Recognized Statistical Rating Organizations (NRSROS) that rated them and $13,215 (6%) was not rated. Of the U.S. government agency securities in the portfolio as of June 30, 2018, $226,539(97%) was rated with either the highest or second highest possible credit ratings by the NRSROS that rated them and $8,136(3%) was not rated.

The Power System's investment policy specifies that supranational notes must be rated "AA" or its equivalent or better by an NRSRO upon purchase. As of June 30, 2019 and 2018, the Power System's investments in supranational notes were rated with the highest possible credit ratings by each of the NRSROs that rated them.

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, 2019, $3,999 (2%) was rated in the category of AAA, $55,344 (35%) was rated in the category of AA, and $100,049(63%) was rated in the category of A by at least one NRSRO. The remaining $16 (less than 1%) of investments in corporate notes was not rated. Of the Power System's investments in corporate notes as of June 30, 2018, $7,926 (5%) was rated in the category of AAA, $51,034, (33%) was rated in the category of AA, and $95,605 (62%) was rated in the category of A by at least one NRSRO. The remaining $31 (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, 2019 and 2018, 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.

(Continued)

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 or National Credit Union Administration. As of June 30, 2019 and 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.

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, 2019, $6,164 (18%) was rated in the category of AAA, $13,700 (41%) was rated in the category of AA, and $13,533 (41%) was rated in the category of A or the equivalent or better short-term rating. Of the Power System's investments in California local agency bonds as of June 30, 2018, $5,688 (17%) was rated in the category of AAA, $20,844, (61%) was rated in the category of AA, and $7,4184 (22%) was rated in the category of A or the equivalent or better short-term rating.

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, 2019 and 2018, 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, 2019, $4,995(14%) was rated in the category of AAA, $23,067 (64%) was rated in the category of AA, and $8,047 (22%) 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, 2018, $12,880 (41%) was rated in the category of AAA, $10,100 (33%) was rated in the category of AA, and $7,935 (26%) was rated in the category of A 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, 2019 and 2018, each of the money market funds in the portfolio had the highest possible ratings by at least two NRSROs.

(Continued)

(vii) 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, 2019, $96,296 (15%) was invested in securities issued by the Federal Home Loan Bank, $51,700 (8%) was invested in securities issued by the Federal Home Loan Mortgage Corporation, and $31,327 (5%) was invested in securities issued by the Federal National Mortgage Association.

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

(viii) Custodial Risk

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

(ix) 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, 2019	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	$	27,930	27,930	—	—	—
U.S. agencies		220,208	—	220,208	—	—
Supranationals		36,197	—	36,197	—	—
Medium-term corporate notes		159,408	—	159,408	—	—
California local agency bonds		33,397	—	33,397	—	—
California state bonds		24,976	—	24,976	—	—
Other state bonds		36,109	—	36,109	—	—
Total debt securities		538,225	27,930	510,295	—	—
Other:						
Commercial paper	$	36,721	—	36,721	—	—
Certificates of deposit		41,067	—	41,067	—	—
Bankers acceptances		1,827	—	1,827	—	—
Money market funds		21,021	—	—	—	21,021
Total other		100,636	—	79,615	—	21,021
Total investments by fair value level	$	638,861	27,930	589,910	—	21,021
Derivative instruments:						
Financial natural gas hedges	$	(7,015)	—	(7,015)	—	—

			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	—	—
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)	—	—

Debt and other securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for identical 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.

(Continued)

(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, 2019 and 2018, the Power System's share of the City's general and special investment pool was $1,925,999 and $1,478,381, which represents approximately 16.8% and 15.3% 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.

Pooled cash is recorded as follows on the statements of net position as of June 30, 2019 and 2018 (in thousands):

	June 30	
	2019	**2018**
Cash and cash equivalents – unrestricted	$ 1,142,128	751,164
Cash and cash equivalents – restricted noncurrent	339,126	318,455
Cash and cash equivalents – restricted current	427,140	384,648
Subtotal cash and cash equivalents per cash flow	1,908,394	1,454,267
Cash – securities lending transactions	17,605	24,114
	$ 1,925,999	1,478,381

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.

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.

(Continued)

At June 30, 2019, 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	$ 39,788	—	—	39,788	—	—
U.S. Treasury notes	5,660,280	—	79,959	624,349	4,911,134	44,838
U.S. agencies securities	1,010,212	275,207	125,256	284,339	262,654	62,756
Medium-term notes	1,488,515	30,108	36,976	342,954	1,078,477	—
Mutual funds	2,441	2,441	—	—	—	—
Commercial paper	2,590,611	1,173,961	543,183	873,467	—	—
Municipal bonds	45,163	—	—	—	45,163	—
Asset-backed securities	240,768	—	—	—	240,768	—
Supranational obligations	223,242	15,900	95,255	16,045	96,042	—
Short-term investment funds	53,652	53,652	—	—	—	—
Securities lending short-term repurchase agreement	112,525	112,525	—	—	—	—
Total general and special pools	$ 11,467,197	1,663,794	880,629	2,180,942	6,634,238	107,594

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 $1.0 billion investments in U.S. government–sponsored enterprises consist of securities issued by the Federal Home Loan Bank - $478.9 million, Federal National Mortgage Association (Fannie Mae) – $442.5 million, and Federal Home Loan Mortgage Corporation (Freddie Mac) – $88.8 million. Of the City's $1.0 billion investments in U.S. agency securities, $560.2 million were rated A-1+ by S&P and P-1 by Moody's while the remaining $450.0 million were rated AA+ by S&P and Aaa by 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 $1.5 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 $20.6 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 NRSRO. The issuing corporation must be organized and operating within the United States and have assets in excess of $500 million. The City's $2.6 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 NRSROs. The City's $2.4 million in investments in mutual funds were rated AAA by S&P and Aaa by Moody's.

Municipal bonds have no minimum rating requirement. The City's $45.2 million investments in municipal bonds were rated AA- by S&P and Aa3 by Moody's.

The City's investments in supranational coupons of $96 million were rated AAA by S&P and Aaa by Moody's; $127.2 million were rated A-1+ by S&P and P-1 by Moody's. These short-term securities are backed by the full faith of the issuing entities, which are rated AAA/Aaa.

Investments in asset-backed securities of $105.4 million were rated AAA by S&P and Aaa by Moody's, $74.2 million were rated Aaa by Moody's and were not rated by S&P, the remaining $61.2 million were rated AAA by S&P and were not rated by Moody's.

Concentration of Credit Risk. The Policy does not allow more than 40% of its investment portfolio be invested in commercial paper or bankers' acceptances, 30% in certificates of deposit, medium-term notes and supranational obligations, 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 represented 5% or more of the total investments as of June 30, 2019.

(Continued)

At June 30, 2018, the investments held in the City Treasury's general and special investment pool programs and their maturities were 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 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 represented 5% or more of the total investments as of June 30, 2018.

(In thousands)

The following table identifies the investment types that are authorized by the Policy as of June 30, 2019 and 2018:

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 – nonpooled 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
Nonnegotiable 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	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.

(Continued)

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 (the 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 (the Pool) is available for lending. The City loans out U.S. Treasury Notes and U.S. Agencies Securities. 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 2019 and 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 part of the City's security lending program as of June 30 (in thousands):

		2019	2018
Type of investment lent:			
For cash collateral:			
U.S. agency securities	$	36,270	133,116
U.S. Treasury notes		74,064	5,967
Supranational coupons		—	4,037
Medium-term notes		—	17,210
Total lent for cash collateral		110,334	160,330
For noncash collateral:			
U.S. Treasury notes		466,002	245,904
U.S. agency securities		—	30,214
Corporate bonds		1,074	—
Total lent for noncash collateral		467,076	276,118
Total securities lent	$	577,410	436,448
Type of collateral received			
Cash collateral*	$	112,525	163,710
Noncash collateral**		—	—
For lent U.S. Treasury notes, U.S. agency securities, medium-term notes, and supranational coupons		478,083	282,448
Total collateral received	$	590,608	446,158

* 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 2018 and 2019

** 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 generally accepted accounting principles. 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; and

Level 3 – Unobservable inputs.

At June 30, 2019 and 2018, the City's summary of the fair value hierarchy of investments is as follows (in thousands):

			June 30, 2019	
			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	$	5,660,280	181,352	5,478,928
U.S. agency securities		449,954	—	449,954
Medium-term notes		1,488,515	—	1,488,515
Municipal bonds		45,163	—	45,163
Asset-backed securities		240,768	—	240,768
Supranational obligations		96,043	—	96,043
Total investments subject to fair value		7,980,723	$ 181,352	7,799,371
Investment not subject to fair value hierarchy:				
U.S. Treasury Bills*		39,788		
Short-term investment funds*		53,652		
U.S. agency securities*		560,258		
Commercial paper*		2,590,611		
Supranational obligations*		127,199		
Securities lending short-term repurchase agreement **		112,525		
Total investments not subject to fair value hierarchy		3,484,033		
Total investments measured at fair value		11,464,756		
Investments measured at the net asset value (NAV)				
Mutual fund – AMT Free, tax exempt		2,441		
Total investments	$	11,467,197		

* 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, 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:				
Short-term investment funds*		177,796		
U.S. Treasury Bills*		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.

Investments classified in Level 1 of the fair value hierarchy of $181.4 million and $49.8 million at June 30, 2019 and 2018, respectively, are valued using observable unadjusted quoted prices in an active market.

Investments in the Level 2 classification totaling $7.8 billion and $8 billion at June 30, 2019 and 2018, 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.

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, 2019 and 2018, the fair values of the financial natural gas hedges were approximately $(7.0) million and approximately $(22.2) million, respectively and were recorded as other noncurrent liabilities on the statement of net position. 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-price swaps and hedge transactions are layered in to achieve dollar cost averaging.

As of June 30, 2019, the Power System's financial natural gas hedges by fiscal year are as follows (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 2019–20	20,130,000	$ 1.87–2.83	07/01/19	06/30/20	$ (4,961)
FY 2020–21	13,140,000	1.93–2.61	07/01/20	06/30/21	(1,105)
FY 2021–22	7,300,000	2.04–2.47	07/01/21	06/30/22	(692)
FY 2022–23	1,825,000	2.26–2.50	07/01/22	06/30/23	(257)
Total	42,395,000				$ (7,015)

* Contract quantities in MMBtu – Million British Thermal Units

As of June 30, 2018, 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 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		(705)
Total	70,682,500					$	(22,206)

* Contract quantities in MMBtu – Million British Thermal Units

The fair value of the natural gas hedges increased by $15.2 million during the year ended June 30, 2019 due to an increase during the year in natural gas prices and is reported as a noncurrent liability and is offset by a deferred outflow on the statement of net position. All fair values were estimated using Platt's forward curves, based on published settlement prices and supplemented by Platt's proprietary models wherever there is less liquid market activity.

(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 Department 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 Policy's 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 covers 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, 2019, the five financial natural gas hedge counterparties were rated by Moody's as follows: one at Aa2, two at A2 and two at A3. 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, 2018, the five financial natural gas hedge counterparties were rated by Moody's as follows: one at A1, one at A2, and three at A3. The counterparties were rated by S&P as follows: one at AA-, one at A, one at A-, and two 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, 2019 and 2018, the fair values of the financial natural gas hedges are within the credit limits and collateral posting was not required.

(b) Basis Risk

The Department is exposed to minimal to no basis risk between the financial natural gas hedges and the equivalent physical gas deliveries as both are settled using the first of the month NW Rocky Mountains Index, while the physical gas deliveries are received at Kern River Opal, where the Department negotiated firm transmission rights. Both locations 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, 2019 and 2018 consists of revenue bonds and refunding revenue bonds due serially in varying annual amounts as follows (amounts in thousands):

Bond issues	Date of issue	Effective interest rate%	Fiscal year of last scheduled maturity	Principal outstanding 2019	Principal outstanding 2018
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 2004, Series C3	04/07/04	4.298	2020	4,230	4,230
Issue of 2006, Series C4	03/01/06	4.040	2022	3,058	3,106
Issue of 2009, Series A	02/19/09	4.773	2040	—	109,285
Issue of 2009, Series B	06/02/09	4.563	2025	—	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	22,805	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	358,575	442,500
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	414,660	456,390
Issue of 2013, Series B	06/04/13	3.347	2033	419,380	427,080
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	196,955
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
Issue of 2016, Series A	05/19/16	3.265	2047	263,215	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	375,000
Issue of 2018, Series A	04/19/18	3.357	2039	354,440	354,440
Issue of 2018, Series B	11/01/18	2.244	2027	240,845	—
Issue of 2018, Series C	11/01/18	2.290	2027	59,155	—
Issue of 2018, Series D	12/20/18	3.587	2049	391,200	—
Issue of 2019, Series A	02/07/19	3.827	2050	345,845	—
Issue of 2019, Series B	05/09/19	2.305	2036	308,875	—
Total principal amount				9,458,013	8,812,411
Unamortized premiums and discounts				912,065	759,850
Revenue bonds, net				10,370,078	9,572,261
Revenue certificates				—	200,000
Bonds and revenue certificates due within one year (including current portion of variable rate debt)				(263,296)	(265,005)
				$ 10,106,782	9,507,256

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, 2019 and 2018 (amounts in thousands):

	Balance June 30, 2018	Additions	Reductions	Balance June 30, 2019
Revenue bonds:				
Principal:				
Beginning balance	$ 8,612,411	—	—	8,612,411
Issuances	—	705,000	—	705,000
Refunding bonds	—	640,920	—	640,920
Scheduled maturities	—	—	(153,615)	(153,615)
Refunded/defeased bonds	—	—	(546,703)	(546,703)
	8,612,411	1,345,920	(700,318)	9,258,013
Premium (discount):				
Beginning balance	759,850	—	—	759,850
Issuances	—	123,123	—	123,123
Refunding bonds	—	107,763	—	107,763
Scheduled amortization	—	—	(73,405)	(73,405)
Written off due to refunding	—	—	(5,266)	(5,266)
	759,850	230,886	(78,671)	912,065
Revenue bonds, net	9,372,261	1,576,806	(778,989)	10,170,078
Revenue certificates	200,000	—	(200,000)	—
Direct placements	200,000	—	—	200,000
Total	$ 9,772,261	1,576,806	(978,989)	10,370,078

(In thousands)

	Balance June 30, 2017	Additions	Reductions	Balance June 30, 2018
Revenue bonds:				
Principal:				
Beginning balance	$ 8,430,402	—	—	8,430,402
Issuances	—	375,000	—	375,000
Refunding bonds	—	354,440	—	354,440
Scheduled maturities	—	—	(131,756)	(131,756)
Refunded/defeased bonds	—	—	(415,675)	(415,675)
	8,430,402	729,440	(547,431)	8,612,411
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	—	5,644	—	5,644
	688,876	140,588	(69,614)	759,850
Revenue bonds, net	9,119,278	870,028	(617,045)	9,372,261
Revenue certificates	200,000	—	—	200,000
Direct placements	200,000	—	—	200,000
Total	$ 9,519,278	870,028	(617,045)	9,772,261

(b) New Issuances

Fiscal Year 2019

In November 2018, the Power System issued $240.9 million of Power System 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 outstanding Power System Revenue Bonds, 2015 Series B, amounting to $268.6 million. The transaction resulted in a net gain for accounting purposes of $0.8 million, which was capitalized as deferred inflows on debt refunding and is being amortized over the life of the refunded bonds.

In November 2018, the Power System issued $59.2 million of Power System Revenue Bonds, 2018 Series C. The net proceeds of $68.4 million, including a $9.2 million issue premium net of underwriter's discount, were deposited into the construction fund to be used for capital improvements.

(Continued)

In December 2018, the Power System issued $391.2 million of Power System Revenue Bonds, 2018 Series D. The net proceeds of $457.9 million, including a $66.7 million issue premium net of underwriter's discount, were used to pay for capital improvements, and refund all of the outstanding Power System Revenue Bonds, 2009 Series A, amounting to $106.5 million. The transaction resulted in a net present value savings of $18.8 million and a net gain for accounting purposes of $0.7 million, which was capitalized as deferred inflows on debt refunding and is being amortized over the life of the refunded bonds.

In February 2019, the Power System issued $345.9 million of Power System Revenue Bonds, 2019 Series A. The net proceeds of $406.9 million, including a $61.0 million issue premium net of underwriter's discount, were deposited into the construction fund to be used for capital improvements.

In May 2019, the Power System issued $308.9 million of Power System Revenue Bonds, 2019 Series B. The net proceeds of $372.2 million, including a $63.4 million issue premium net of underwriter's discount, were used to refund all of the outstanding Power System Revenue Bonds, 2009 Series B, amounting to $171.6 million and all of the outstanding Power System Revenue Commercial Paper Notes, amounting to $200 million. The transaction resulted in a net present value savings of $26.4 million and a net gain for accounting purposes of $1.4 million, which was capitalized as deferred inflows on debt refunding and is being amortized over the life of the refunded bonds.

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 a $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.

(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, 2019, the following revenue bonds outstanding are considered defeased (amounts in thousands):

Bond issues		Principal outstanding
Second issue of 1993	$	5,175
Refunding issue of 1994		—
Issue of 1994		3,450
Issue of 2009 Series B		171,590
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
	$	184,175

(10) Variable Rate Bonds

As of June 30, 2019 and 2018, the Power System had $1,114 million in variable rate bonds of which $200 million is in direct placement bonds as discussed in note 11. The variable rate bonds currently bear interest at weekly and daily rates ranging from 0.75% to 1.68% as of June 30, 2019 and 0.45% to 1.5% as of June 30, 2018. 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 January 2020 for the $106 million, January 2021 for the $267 million, and in January 2023 for the $206 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, 2019 and 2018.

(11) Direct Placements and Line of Credit

Under GASB 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*, the Power System has the following direct placement debt and unused line of credit:

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. Certain default provisions under the Amended CCA include, but are not limited to, failure to pay amounts due under the Amended CCA and certain other obligations of the Power System, failure to perform certain covenants under the Amended CCA, actions taken in connection with a debt restructuring or similar of the Department, significant rating downgrades of obligations payable from the Power Revenue Fund, and significant nonappealable judgments against the Department. Such defaults may result in a mandatory redemption of the Power 2014A Bonds or other remedial actions taken by Wells Fargo Bank. The Power System does not have any assets pledged as collateral for direct placement debt, termination events with finance-related consequences, or subjective acceleration clauses.

On December 14, 2018, the Power System entered into an Amended and Restated Revolving Credit Agreement (Amended RCA) and the related Amended and Restated Fee and Interest Rate Agreement with Wells Fargo Bank, National Association with a $300 million commitment and the option to request additional commitment, as needed up to a total commitment of $500 million. The Department can request loans for Water System improvements, Power System improvements and/or such other lawful purposes of the Department. The interest charged for tax-exempt loans is based on SIFMA plus a spread of 0.50% or 75% of one-month LIBOR plus a spread of 0.45%. The interest charge for taxable loans is based on one-month LIBOR plus a spread of 0.45%. The Amended RCA expires in December 2023. As of June 30, 2019, the Power System has no obligations outstanding under the Amended RCA.

(12) Revenue Certificates

In May 2019, the Power System refunded all outstanding commercial paper notes, amounting to $200 million, bearing interest at an average rate of 1.67%. As of June 30, 2019, the Power System has no outstanding commercial paper notes.

(13) Principal Maturities and Interest

As of June 30, 2019, annual principal maturities and interest on an accrual basis are as follows (amounts in thousands):

		Principal	Interest and amortization
Fiscal year(s) ending June 30:			
2020	$	171,906	371,094
2021		189,516	364,859
2022		205,536	361,261
2023		252,053	355,477
2024		274,926	347,108
2025–2029		1,633,534	1,568,897
2030–2034		1,919,326	1,228,841
2035–2039		1,789,410	900,497
2040–2044		2,002,905	450,343
2045–2049		943,660	55,904
2050–2054		39,043	—
Total requirements		9,421,815	6,004,281
Debt service payments already paid to sinking fund – 2010C bonds		36,198	—
	$	9,458,013	6,004,281

Interest and amortization are net of $905 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 in notes 10 and 11 will not be exercised and should the bondholders exercise the tender options, the Power System would be required to redeem the $1,114 million in variable rate bonds and direct placement over the next six years, as follows: $91 million in fiscal year 2020, $223 million in each of the fiscal years 2021 through 2024, and $131 million in fiscal year 2025. Accordingly, the statements of net position recognize the possibility of the exercise of the tender options and reflect the $91 million that could be due in fiscal year 2020 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, 2019 averages 1.410%.

(14) Retirement Plan

(a) Plan Description

The Department has a funded contributory retirement plan covering substantially all of its employees. 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 at least 5 years of continuous Department 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:

- 1.5% at age 60 with 5 years of continuous Department service or 10 years of qualifying service
- 2.0% at age 55 with 30 years of service credit
- 2.0% with 30 years of qualifying service
- 2.0% at age 63 with 5 years of continuous Department service or 10 years of qualifying service
- 2.1% at age 63 with 30 years of qualifying service

The reduced early retirement benefits for Tier 2 are the same as Tier 1. These are applied to the age 60 benefit for members (with 2.0% formula) who retire before age 60 with less than 30 years of service credit. Service Credit with the Department and with Lacers is combined for satisfying this requirement.

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, 2018 and 2017 measurement dates for the June 30, 2019 and 2018 net pension liability, pension plan membership, which consisted of Water and Power System members, consisted of the following:

		2019	2018
Retired members or beneficiaries currently receiving benefits	$	9,165	9,272
Vested terminated members entitled to, but not yet receiving, benefits		1,728	1,648
Active members		10,114	9,806
Total	$	21,007	20,726

(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 2019, 2018, and 2017 (based on the July 1, 2018, 2017, and 2016 valuations) were 40.15%, 44.62%, and 45.25% of compensation, respectively. The average member contribution rate for fiscal years 2019, 2018, and 2017 (based on the July 1, 2018, 2017, and 2016 valuations) was 7.10% 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 2019, 2018, and 2017 amounted to $298 million, $269 million, and $249 million, respectively.

(e) Net Pension Liability

At June 30, 2019 and 2018, the Power System reported a liability of $618 million and $917 million for its proportionate share of the net pension liability, respectively. The net pension liability was measured as of June 30, 2018 and 2017, 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, 2019, the Power System's proportion was 67.9% compared to 68.3% and 68.1% as of June 30, 2018 and 2017, respectively.

(Continued)

(In thousands)

(f) Actuarial Assumptions

The Department's net pension liability as of June 30, 2019 and 2018 was measured as of June 30, 2018 and 2017 using actuarial valuations as of June 30, 2018 and 2017 respectively. The actuarial assumptions used in these valuations 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 June 30, 2018 and 2017 actuarial valuations:

Actuarial assumptions	2018	2017
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, 2019 and 2018. 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, 2019 and 2018.

(h) Long-Term Expected Rate of Return

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, 2019 and 2018	
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 %	

(i) *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, 2019 and 2018, 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, 2019	$ 1,826,112	618,010	(380,974)

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)

(j) *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.

(Continued)

(k) 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 $116,889 and $165,984 for the years ended June 30, 2019 and 2018, 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, 2019 and 2018, the Power System reported $248,836 and $403,310, respectively, for deferred outflows of resources and deferred inflows of resources of $287,735 and $324,374, respectively.

The below tables summarize the deferred inflows of resources and deferred outflows of resources at June 30, 2019 and 2018 (amounts in thousands):

		June 30	
Deferred outflows of resources		**2019**	**2018**
Changes in proportion and differences between entity contributions and proportionate share of contributions	$	3,804	5,563
Changes of assumptions and other inputs		239,198	397,747
Total deferred outflows of resources	$	243,002	403,310

		June 30	
Deferred inflows of resources		**2019**	**2018**
Changes in proportion and differences between entity contributions and proportionate share of contributions	$	6,022	3,343
Net difference between projected and actual earnings on pension plan investments		95,011	49,754
Difference between expected and actual experience in the total pension liability		180,868	271,277
Total deferred inflows of resources	$	281,901	324,374

In addition to the deferred outflows noted above, there is also $282,388 and $296,294 of deferred outflows related to pension contributions made after the measurement date as of June 30, 2019 and 2018, 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 2019	June 30 2018
2019	$	—	21,553
2020		61,185	85,741
2021		23,235	47,579
2022		(78,866)	(55,081)
2023		(44,832)	(20,856)
2024		321	—
2025		58	—
Total	$	(38,899)	78,936

(15) 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*.

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 medical carrier and Medicare Part B premium but not the dental premium. For Tier 1, the monthly medical subsidy ranges from $30.32 to $1,751.18 depending on age and service at retirement. Tier 2, the monthly medical subsidy ranges from $30.32 to $875.59, depending on age and service at retirement. The monthly dental subsidy for most retirees is $35.79. 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.

(Continued)

(In thousands)

(c) Employees Covered by Benefit Terms

At the Department's measurement date of June 30, 2018 for the June 30, 2019 reporting period, the following employees were covered by the benefit terms:

Plan Membership	Retiree healthcare	Death benefit
Beneficiaries currently receiving benefits	—	91
Retired members currently receiving benefits	8,185	7,199
Vested terminated members not receiving benefits	—	656
Active members	10,114	10,114
Total	18,299	18,060

At the Department's measurement date of June 30, 2017 for June 30, 2018 reporting period, 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 Board of Commissioners establishes rates for retiree healthcare plan based on an actuarially determined rate. For the years ended June 30, 2019 and 2018, the Department's average contribution rate was 9.9% and 10.1% of covered-employee payroll, respectively. Employees are not required to contribute to the retiree healthcare plan. Power System contributions to the retiree healthcare plan were $64.6 million and $60.2 million including administrative expenses of $0.5 million for the fiscal years ended June 30, 2019 and 2018, respectively.

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, 2019 are as follows:

(In thousands)

		Members	
	Department	**Active**	**Retired**
Family death benefit	$1.76 monthly per active member	N/A	N/A
Supplemental family death benefit insured lives	N/A	$2.25 biweekly	$4.9 monthly
Contributing	$.21 per $100 of payroll	$1.00 biweekly	N/A
Noncontributing	$1.01 per $100 of monthly retirement benefit	N/A	N/A

Power System contributions to the death benefits plan were $5.7 million including administrative expenses of $0.7 million for the fiscal year ended June 30, 2019.

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
Contributing	$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 benefit plan were $5.5 million including administrative expenses of $0.6 million for the fiscal year ended June 30, 2018.

(e) Net OPEB Liability

The Power System reported a liability of $340 million and $379 million for its proportionate share of the net OPEB liability for retiree healthcare plan and the death benefit plan as of June 30, 2019 and 2018. The net OPEB liabilities for each of the plans was measured as of June 30, 2018 and 2017 and the total OPEB liability used to calculate the net OPEB liability was determined by actuarial valuations as of June 30, 2018 and 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, 2019 and 2018, the Power System's proportion of the retiree healthcare plan and the death benefit plan net OPEB liabilities was 67.9% and 68.3%.

The following table shows the Power System's proportionate share of the net OPEB liability for each of the plans as of June 30, 2019 (amounts in thousands):

		2019	2018
OPEB liability for retiree healthcare plan	$	260,393	297,306
OPEB liability for death benefit plans		79,188	81,373
Net OPEB liability	$	339,581	378,679

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

The total OPEB liability in the June 30, 2018 and 2017 actuarial valuations used for the Power System's June 30, 2019 and 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 (noncontributing 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 years				
Medicare medical plans	6.50, graded down to 4.5% over 8 years	—	—	—	—
Dental and Medicare Part B	4.5%				
Member contribution rate	None	None	$2.25 per biweekly 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 (noncontributing 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 requirements	Tier 1 – Age 60 with 5 years of service; age 55 with 10 years of service in the last 12 years; any age with 30 years of service; or receiving permanent total disability benefits from the Plan. Tier 2 – Age 60 with 5 years of continuous service with the Plan immediately prior to reaching eligibility; or age 60 with 10 years of service; or any age with 30 years of service; or receiving permanent total disability benefits from the Plan	Preretirement death of an active, full, contributing member at any age; or Postretirement death of a member receiving a monthly retirement from WPERP with at least five years of service at retirement	Preretirement death of an active, full, contributing member at any age; or Postretirement death of a member receiving monthly retirement from WPERP	Any age with six months of continuous service. Preretirement 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

(In thousands)

	Retiree healthcare plan	Family death benefit	Supplemental death benefit	Insured lives benefit (contributing active members)	Insured lives death benefit (noncontributing members)
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 $1,751.18. Tier 2 $30.32 to $875.59	$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 $20000
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% for the years ended June 30, 2019 and 2018. 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 for the years ended June 30, 2019 and 2018. 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):

	June 30, 2019		
	1% decrease	**Current**	**1% increase**
Discount rate	6.25 %	7.25 %	8.25 %
Net OPEB liability – Retiree healthcare plan	$ 493,344	260,393	69,038
Discount rate	2.50 %	3.50 %	4.50 %
Net OPEB liability – Death benefit plan	$ 93,938	79,188	67,457

	June 30, 2018		
	1% decrease	**Current**	**1% increase**
Discount rate	6.25 %	7.25 %	8.25 %
Net OPEB liability – Retiree healthcare plan	$ 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):

	June 30, 2019		
	1% decrease	**Current**	**1% increase**
Net OPEB liability – Retiree healthcare plan	$ 45,178	260,393	549,393

* 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 4.00% all years for dental and Medicare Part B subsidy costs

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

	June 30, 2018		
	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% 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.

(In thousands)

(i) OPEB Expense and Deferred Outflows and Inflows of Resources Related to OPEB

In addition to amortization expense of the regulatory asset discussed at note 6, the Power System recognized OPEB expense of $25.9 million and $5.9 million for its proportionate share of the retiree healthcare and death benefits plans for the year ended June 30, 2019, respectively. At June 30, 2019, the Power 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	$	1,547	1,558	106	384	1,653	1,942
Changes of assumptions		2,803	34,048	—	—	2,803	34,048
Net difference between projected and actual earnings on OPEB plan investments		—	58,175	1,008	—	1,008	58,175
Differences between expected and actual experience		—	25,578	61	2,598	61	28,176
		4,350	119,359	1,175	2,982	5,525	122,341
Employer contributions subsequent to the measurement date		64,593	—	5,681	—	70,274	—
Totals	$	68,943	119,359	6,856	2,982	75,799	122,341

(In thousands)

For the year ended June 30, 2018, the Power System recognized OPEB expense of $41.8 million and $6 million for its proportionate share of the healthcare and death benefits plans, respectively. At June 30, 2018, the Power System reported deferred outflows and inflows of resources related to OPEB plans from the following sources:

		Retiree healthcare fund		Death benefits fund		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 deferred outflows of resources in the accompanying financial statements.

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:

		For the year ended June 30, 2019		
		Retiree healthcare plan	Death benefits plan	Total
Year ended June 30:				
2020	$	(29,219)	(159)	(29,378)
2021		(29,218)	(159)	(29,377)
2022		(29,218)	(159)	(29,377)
2023		(16,172)	(298)	(16,470)
2024		(10,646)	(448)	(11,094)
Thereafter		(536)	(584)	(1,120)
	$	(115,009)	(1,807)	(116,816)

(In thousands)

	For the year ended June 30, 2018		
	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) 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, and $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.

(k) Disability Benefits

The Power System’s allocated share of disability benefit plan costs and administrative expenses totaled $12.5 million and $12.0 million for the fiscal years 2019 and 2018, respectively. Disability benefits are paid to active employees who qualify under the Plan’s provisions and terminate with the employee’s retirement.

(16) 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, 2018	Additions	Reductions	Balance, June 30, 2019
Deferred inflows from regulated business activities:				
Rate stabilization	$ 100,000	—	—	100,000
Green Power Program	3,720	1,152	—	4,872
	$ 103,720	1,152	—	104,872
Accrued workers' compensation claims	$ 70,474	—	—	70,474
Other liabilities				
Derivative instrument liabilities	22,204	—	(15,189)	7,015
Environmental remediation liability	68,347	25,580	—	93,927
	$ 90,551	25,580	(15,189)	100,942

	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
Other liabilities:				
Derivative instrument liabilities	14,640	7,564	—	22,204
Environmental remediation liability	38,043	30,304	—	68,347
	$ 52,683	37,868	—	90,551

(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, 2019 and 2018, 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 the accrued workers' compensation liability as presented in the statements of net position was 2% at both June 30, 2019 and 2018. 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 been estimated at $88 million and $120 million for both June 30, 2019 and 2018. 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, 2019 and 2018.

Changes in the Department's undiscounted workers compensation liability since June 30, 2017 are summarized as follows (amounts in thousands):

		June 30		
		2019	**2018**	**2017**
Balance at beginning of year	$	120,026	115,104	103,699
Current year claims and changes in estimates		(4,121)	34,292	37,501
Payments applied		(27,665)	(29,370)	(26,096)
Balance at end of year	$	88,240	120,026	115,104

The Power System's portion of the discounted accrued workers' compensation liability is estimated at $70 million for both June 30, 2019 and 2018.

(17) 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 $27 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 years 2019 and 2018, the Power System transferred $233 million and $242 million in transfers and $28 million and $27 million in administrative and Office of Public Accountability reimbursements to the City. See note 18(a).

(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

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. 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.

(18) 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, 2017, the Power System had billed approximately $52 million under the 2016 Ordinance that under-the-settlement agreement needed to be returned to customers' net of attorneys' fees and other administrative costs. Accordingly, for the fiscal year ended June 30, 2017, 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 2019, 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, 2019:

Revenue type	Basis of revenue	kWh	under the 2008 ordinance	Revenue
Retail sales	The 2008 Ordinance	21,961,383	$ 0.12628	$ 2,773,283
Retail sales	The 2016 Ordinance	21,961,383		1,180,716
Wholesale sales	Contract			28,817
Transmission sales	Contract			72,569
Rent from electric property	Contract			1,519
Other service charges	Fee schedule			21,765
Unbilled sales	Estimated			20,223
Bad debt expense	Estimated			(27,962)
Total operating revenue				$ 4,070,930

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 Power System authorized total transfers of $233 million and $242 million in fiscal years 2019 and 2018, respectively, from the Power System to the reserve fund of the City.

(b) Asset Retirement Obligations

As described in note 2, the Power System adopted GASB Statement No. 83, *Certain Asset Retirement Obligations,* in fiscal year 2019, retroactive to July 1, 2017. This standard required the Power System to record a liability and deferred outflow associated with the retirement of tangible capital assets that it has an enforceable legal obligation to retire. GASB 83 requires governmental entities to record a liability and a corresponding deferred outflow at the time there is an external obligating event such as a federal or state regulation, a legally binding contract or court judgment and when there is an internal obligating event which is at the time an asset is acquired or if constructed placed in service. In accordance with GASB 83, the Power System estimated and recorded its asset retirement obligations at the current value of outlays expected to be incurred using site specific cost studies performed by third-party consultants or published cost studies of similar sites. Current value is the amount that would be paid if all equipment, facilities, and services included in the estimate were acquired at the end of the current reporting period. This approach includes probability weighting of potential outcomes when this data can be obtained at a reasonable cost.

(In thousands)

The Power System is the minority owner of Palo Verde Nuclear Generating System. The Power System's minority share interest is 5.7% of the total decommissioning liability of $2,962,612 and $2,848,665 at June 30, 2019 and 2018. Arizona Public Service has operating responsibility as well as minority interest (29.1%). Other minority owners are Salt River Project (17.5%), El Paso Electric Company (15.8%), Public Service Company of New Mexico (10.2%) and Southern California Public Power Authority (5.9%). In accordance with GASB 83, the Power System recorded its proportionate share of the asset retirement obligation based on its ownership percentage of estimates made by the primary owner of the asset which measures its liability under standards set by the Financial Accounting Standards Board.

The Power System had the following asset retirement obligations at June 30, 2019:

Asset	Obligating event	Timeframe required for decommissioning	June 30, 2018	Additions	Payments	June 30, 2019
Navajo Generating Station	Legal agreement resulting from Sales Contract with Salt River Project	Plant will be out of commission as of December 2019	$ 102,623	—	(21,473)	81,150
Palo Verde Nuclear Generating Station	Ownership agreement	Unit 1: June 1, 2045 Unit 2: April 24, 2046 Unit 3: November 25, 2047	162,374	6,495	—	168,869
Other	Lessee or ownership agreements	2029–2064	16,239	427	—	16,666
Total asset retirement obligation liability			$ 281,236	6,922	(21,473)	266,685

The Power System had the following asset retirement obligations at June 30, 2018:

Asset	Obligating event	Timeframe required for decommissioning	June 30, 2017	Additions	Payments	June 30, 2018
Navajo Generating Station	Legal agreement resulting from Sales Contract with Salt River Project	Plant will be out of commission as of December 2019	$ 111,579	—	(8,956)	102,623
Palo Verde Nuclear Generating Station	Ownership agreement	Unit 1: June 1, 2045 Unit 2: April 24, 2046 Unit 3: November 25, 2047	156,129	6,245	—	162,374
Other	Lessee or ownership agreements	2029–2064	15,877	362	—	16,239
Total asset retirement obligation liability			$ 283,585	6,607	(8,956)	281,236

The Power System amortizes its deferred outflows using the straight-line method over the remaining useful life of the asset or lease term, if leased. The liability is reduced as actual decommissioning costs are paid. Amortization of the deferred outflow is recorded as operating and maintenance expense in the statements of revenue, expenses, and changes in net position. Prior to the adoption of GASB 83, the Power System had funded an obligation for decommissioning of Palo Verde Nuclear Generating Station. The Power System has restricted investments in the amount of $140.7 million and $134 million for the years ended June 30, 2019 and 2018 related to this reserve and has reduced the deferred outflow related to this asset retirement obligation by these amounts.

(In thousands)

Deferred outflows related to the Power System's assets retirement obligations are as follows for the year ended June 30, 2019:

Asset	Remaining useful life of asset/ lease term		June 30, 2018	Additions	Amortization	June 30, 2019
Navajo Generating Station	1	$	102,623	—	(102,623)	—
Palo Verde Nuclear Generating Station	29		8,797	6,495	(429)	14,863
Other	11-46		16,239	427	(1,540)	15,126
Total deferred outflows – asset retirement obligations		$	127,659	6,922	(104,592)	29,989

In fiscal year 2019, the Power System amortized the remaining balance of its deferred outflow on the Navajo Generating Station due to the announcement of the plant's closure in December 2019.

Deferred outflows related to the Power System's assets retirement obligations are as follows for the year ended June 30, 2018:

Asset	Remaining useful life of asset/ lease term		June 30, 2017	Additions	Amortization	June 30, 2018
Navajo Generating Station	2	$	111,579	—	(8,956)	102,623
Palo Verde Nuclear Generating Station	30		2,552	6,245	—	8,797
Other	30–47		15,877	362	—	16,239
Total deferred outflows – asset retirement obligations		$	130,008	6,607	(8,956)	127,659

(c) Environmental Liabilities

Numerous federal, state, and local 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 Power System estimates its environmental liabilities using the expected cash flow method as required by GASB 49. This method estimates the current value of outlays expected to be incurred measured as a sum of the probability weighted amounts in a range of possible estimated amounts. The Power System's environmental liabilities are primarily related to generating and service stations they own that have had release of hazardous materials or waste they are obligated by a regulator to clean up. The estimated time frame for clean-up and monitoring of these sites is 5–25 years. The Power System's obligations are included in other noncurrent liabilities on the statements of net position and were approximately $94 million and $68 million as of June 30, 2019 and 2018, respectively. These estimates are reviewed and updated annually.

(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, 2019.

(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, 2019.

(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, 2019 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.

(19) Subsequent Events

(a) Bond Sale

In October 2019, the Power System issued $325 million of revenue bonds, 2019 Series C. The net proceeds of $410.5 million, including a $85.5 million issue premium net of underwriter's discount, were deposited into the construction fund to be used for capital improvements.

(b) FBI Investigation

In July 2019, the Federal Bureau of Investigation began conducting an investigation of the Department and the Office of the City Attorney. The Department is cooperating fully with the investigators. The Department has been requested by the investigating agency to exercise confidentiality with respect to the investigation. The Department can generally state that the search warrants served by the Federal Bureau of Investigation on the Department and the Office of the City Attorney relate to issues that have arisen over the class action litigation and settlement regarding the Department's billing system and the lawsuit against Price Waterhouse Coopers. Based on the Department's understanding of the nature of the investigation and the current status of the lawsuits relating to the new billing system, the Department does not believe that the investigation or the billing-system-related lawsuits will have a material adverse effect on the Department's operations or financial position.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Required Supplementary Information

June 30, 2019

(Unaudited)

Schedule of the Power System’s Proportionate Share of the Net Pension Liability**

Last 10 Fiscal Years*

(Amounts in thousands other than percentages)

	2019	2018**	2017	2016	2015
Power System’s proportion of the collective net pension liability	67.879%	68.252%	68.108%	67.397%	67.656%
Power System’s proportionate share of the collective net pension liability	$ 618,010	916,758	1,492,508	771,121	860,748
Power System’s covered-employee payroll	647,319	609,035	586,967	565,605	554,731
Power System’s proportionate share of the collective net pension liability as a percentage of covered payroll	95.47%	150.53%	254.27%	136.34%	155.16%
Pension plan’s fiduciary net position as a percentage of total pension liability	93.10%	89.39%	82.17 %	89.80 %	88.41 %

* 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, 2014–2018 for the Power System’s fiscal years of June 30, 2015–2019, respectively.

See accompanying independent auditors’ report.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Required Supplementary Information

June 30, 2019

(Unaudited)

Schedule of the Department's Pension Contributions *

Last 10 Fiscal Years

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 payroll	Contributions as a percentage of covered payroll
2019	$	408,750,192	410,165,124	(1,414,932)	1,028,212,002	39.89 %
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

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

(2) All actuarially determined contributions through June 30, 2015 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.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Required Supplementary Information

June 30, 2019

(Unaudited)

Schedule of Power System's Proportionate Share of the Net OPEB Liability – Retiree Healthcare Plan

Last 10 Fiscal Years

(Amounts in thousands other than percentages)

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
June 30, 2019	June 30, 2018	67.88 %	$ 260,393	728,719	$ 647,319	40.23 %	84.46 %
June 30, 2018	June 30, 2017	68.25	297,306	676,930	609,032	48.82	81.44

See accompanying independent auditors' report.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Required Supplementary Information

June 30, 2019

(Unaudited)

Schedule of Power System's Proportionate Share of the Net OPEB Liability – Death Benefit Plan

Last 10 Fiscal Years

(Amounts in thousands other than percentages)

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
June 30, 2019	June 30, 2018	67.88 %	$ 79,188	728,719	$ 647,319	12.23 %	18.91 %
June 30, 2018	June 30, 2017	68.25	81,372	676,930	609,032	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 payroll	Contributions as a percentage of covered payroll
2019	$ 80,851	$ 101,595	(20,744)	1,028,212	9.88 %
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

(1) All actuarially determined contributions through June 30, 2017 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.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
POWER SYSTEM

Required Supplementary Information

June 30, 2019

(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)	Covered payroll	Contributions as a percentage of covered payroll
2019	$ 7,260	7,260	—	1,028,212	0.71 %
2018	7,137	7,137	—	953,636	0.75
2017	7,138	7,138	—	892,332	0.80

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

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

See accompanying independent auditors' report.