# California Independent System Operator Corporation

Financial Statements December 31, 2016 and 2015



# California Independent System Operator Corporation Index December 31, 2016 and 2015

## Page(s)

Report of Independent Auditors	1–2
Management's Discussion and Analysis (unaudited)	3–11
Statements of Net Position	12
Statements of Revenues, Expenses and Changes in Net Position	13
Statements of Cash Flows	14–15
Notes to Financial Statements	16–38



## **Report of Independent Auditors**

To Members of the Board of Governors California Independent System Operator Corporation

We have audited the accompanying financial statements of the California Independent System Operator Corporation, which comprise the statements of net position as of December 31, 2016 and 2015, and the related statements of revenues, expenses and changes in net position and of cash flows for the years then ended.

## Management's Responsibility for the Financial Statements

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

## Auditors' Responsibility

Our responsibility is to express an opinion on the financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. 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 our 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, we consider internal control relevant to the Company'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 Company'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.

*PricewaterhouseCoopers LLP, 400 Capitol Mall, Suite 600, Sacramento, CA 95814 T: (916) 930 8100, F: (916) 930 8450,* www.pwc.com/us



## **Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the California Independent System Operator Corporation at December 31, 2016 and 2015, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## **Other Matters**

The accompanying management's discussion and analysis on pages 3 through 11 is required by accounting principles generally accepted in the United States of America 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 the 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 audits of the basic financial statements. We do not express an opinion or provide any assurance.

PricewatuhouseCoopers LLP

April 7, 2017

# California Independent System Operator Corporation Management's Discussion and Analysis (Unaudited) December 31, 2016 and 2015

The following discussion and analysis of the California Independent System Operator Corporation (the Company) provides an overview of the Company's financial activities for the years ended December 31, 2016 and 2015. This discussion and analysis should be read in conjunction with the Company's financial statements and accompanying notes, which follow this section.

## Background

The Company is a nonprofit public benefit corporation incorporated in May 1997 that is responsible for ensuring the efficient and reliable use of one of the largest and most modern power grids in the world for the benefit of consumers. The Company operates the transmission grid in most of California and a part of Nevada. It conducts comprehensive planning efforts and administers a competitive energy market for more than 160 market participants that provides open and non-discriminatory access to the transmission grid, and enables entities outside the transmission grid controlled by the Company to make efficient use of supply resources. The company also runs and energy imbalance market for several balancing authority areas in the western interconnection.

The Company's power market matches supply with demand, maintains operating reserves and allocates space on transmission lines for electricity deliveries. The Company is regulated by the Federal Energy Regulatory Commission and complies with standards set by the North American Electric Reliability Corporation and the Western Electricity Coordinating Council. A five-member board of governors (the Board) appointed by the Governor of California and confirmed by the California State Senate governs the Company.

## **Financial Reporting**

The Company's accounting records are maintained in accordance with generally accepted accounting principles for proprietary funds as prescribed by the Governmental Accounting Standards Board (GASB) and where not in conflict with GASB pronouncements, accounting principles prescribed by the Financial Accounting Standards Board (FASB).

Cash held by the Company on behalf of market participants is recorded in a restricted asset account with a corresponding liability due to market participants in the statements of net position. Except for the retention of restricted assets noted above, the financial statements reflect a net reporting of market activities wherein the financial statements do not include the revenues and expenses, cash flows, or assets and liabilities associated with the market transactions the Company facilitates.

## Revenue

The Company charges a Grid Management Charge (GMC) to market participants to recover the Company's operating costs, capital expenditures, debt service costs, and to provide for an operating reserve. The GMC is comprised of the following three service categories: market services, system operations and congestion revenue rights services.

The Company receives other revenues outside of its GMC charges including, but not limited to: fees paid for participation in the Western Energy Imbalance Market (EIM), generator interconnection studies, and for operation of the California-Oregon Intertie Path.

After accounting for other revenues, the Company establishes its annual net revenue requirement which is allocated to the three GMC service categories based on percentages established in the tariff. Category costs are then divided by forecasted volumes to establish the annual rates.

## Liquidity

The Company's tariff allows for the GMC rates to be adjusted during the year to ensure collection of the revenue requirement. During the year, if forecasted revenues from any of the three GMC service categories is materially different, as defined in the tariff, from budgeted revenues, the Company may adjust the rate for the affected category to realign the forecast revenue with the budgeted revenue.

Per the tariff, the revenue requirement includes an operating reserve, which is 15% of the current year's operating and maintenance budget, and a debt service reserve, which is 25% of the debt service to be paid during the year. The Company's operating and debt service reserves were fully funded in 2016 and 2015.

Furthermore, the Company maintains capital reserves in its unrestricted funds which consist of funds collected through the revenue requirement for future capital expenditures.

## The Market

The Company operates a day-ahead market for all twenty-four hours of the next operating day, and a real-time market that enables resources to schedule in 15 minute intervals with 5 minute dispatching. This market structure is the vehicle for providing open-access transmission service to users of the transmission grid. The market clears energy bids and offers short-term energy purchases and sales, thus enabling economic dispatch of generating resources to maintain continuous balance of supply and demand and management of congestion on the grid. The market also procures reserve capacity or ancillary services to maintain reliable operation under unexpected changes in grid conditions. In addition, the Company performs a settlement and clearing function by charging and collecting payments from users of these services and paying providers of such services.

The Company continues to develop market enhancements to increase reliability, efficiency and provide accuracy of market results in the future. The current market enables electricity to be priced for production and delivery at the point of its grid interconnection, which increases transparency by sending signals for competitive investments in transmission and generation. The market operates on an advanced and flexible platform helping to integrate renewable resources as well as demand response. These enhancements increase the functionality and flexibility of the market system to meet the on-going needs of market participants.

In 2014, the Company's Western Energy Imbalance Market went into operation. The EIM provides reliability and renewable integration benefits to the West while also providing economic benefits to participants. It is an automated, real-time energy wholesale market that matches the lowest cost electricity supply with demand every 15 minutes and dispatches every five minutes. This flexibility provides more opportunities to integrate cleaner sources of energy, such as wind and solar, that may be produced in one area but needed in another. Eight entities are participating or have committed to participate in EIM: PacifiCorp, NV Energy, Puget Sound Energy, Arizona Public Service, Portland General

Electric, Idaho Power, Seattle City Light, and the Balancing Authority of Northern California acting on behalf of its member Sacramento Municipal Utility District

## **New Backup Operations Facility**

In September 2015, the Company began construction of its new backup operations facility on land the Company owns in Lincoln, CA. In November 2016, the facility was substantially completed and subsequently occupied. The new site replaces the existing leased facility in Alhambra, CA, which was vacated in December 2016 although the lease does not expire until August, 2017. The new facility was completed ahead of schedule and under budget.

## **Financial Highlights**

## Statements of Net Position, Statements of Revenues, Expenses and Changes in Net Position

The financial statements provide both short-term and long-term information about the Company's financial status. The statements of net position include all of the Company's assets and liabilities, using the accrual method of accounting, and identify any assets which are restricted as a result of bond covenants or external commitments. The statements of net position provide information about the nature and amount of resources and obligations at specific points in time.

The statements of revenues, expenses and changes in net position report all of the Company's revenues and expenses during the year. The statements of cash flows report the cash provided and used during the year by operating activities, as well as other cash sources such as investment income and debt financing, and other cash uses such as payments for bond principal and capital additions.

## **Condensed Statements of Net Position (in millions)**

	2016		2015		2014
Assets and Deferred Outflows					
Current assets	\$	436.1	\$	402.6	\$ 510.2
Fixed assets, net		187.2		175.0	180.3
Other noncurrent assets		157.0		142.4	125.5
Deferred outflows		9.0		9.8	 10.4
	\$	789.3	\$	729.8	\$ 826.4
Liabilities and Net Position					
Current liabilities	\$	446.7	\$	391.5	\$ 495.6
Long-term debt, net of current portion		186.8		192.0	197.2
Other noncurrent liabilities		21.3		21.5	22.1
Net position		134.5		124.8	 111.5
	\$	789.3	\$	729.8	\$ 826.4

## Assets

## **Current Assets (in millions)**

	2016			2015	2014	
Cash and cash equivalents Short-term investments Accounts receivable and other assets	\$	363.5 50.4 22.2	\$	326.9 52.1 23.6	\$	429.3 63.9 17.0
	\$	436.1	\$	402.6	\$	510.2

## 2016 Compared to 2015

As of December 31, 2016, current assets increased by \$33.5 million during the year. This increase is largely due to higher cash and cash equivalents of \$36.6 million caused by increases in collateral funds held for market participants. Collateral increases were offset by long-term investment purchases and small decreases in short-term investments and accounts receivable.

## 2015 Compared to 2014

As of December 31, 2015, current assets decreased by \$107.6 million during the year. This decrease is largely due to the decrease in cash and cash equivalents of \$102.4 million caused by decreases in collateral funds held for market participants and to the distribution of non-refundable interconnection funds, and to lower short-term investments of \$11.8 million. This was offset by an increase of \$6.6 million in accounts receivable, primarily due to grid management charges billed but not collected by the Company until early 2016.

## Fixed Assets, Net (in millions)

	2016			2015	2014
Net assets in service Work-in-progress	\$	173.7 13.5	\$	161.9 13.1	\$ 176.2 4.1
	\$	187.2	\$	175.0	\$ 180.3

## 2016 Compared to 2015

Total fixed assets, net of accumulated depreciation, increased in 2016 by \$12.2 million compared to 2015. The increase is primarily due to the increase in net assets in service of \$11.8 million, as a result of the completion of the new back-up facility and other projects of \$35.5 million, less the current year depreciation expense of \$23.8 million. Work in-progress increased by \$0.4 million compared to 2015 due to the ongoing work to new capital projects during the year.

## 2015 Compared to 2014

Total fixed assets, net of accumulated depreciation, decreased in 2015 by \$5.3 million compared to 2014. The decrease is primarily due to the current year depreciation expense of \$24.3 million, offset by new assets placed in service of \$10.0 million. Work in-progress increased by \$9.0 million compared to 2014 due to the ongoing work on the new backup facility and to new capital projects during the year.

## **Other Noncurrent Assets (in millions)**

	2016			2015	2014
Long-term investments Other assets	\$	153.1 3.8	\$	138.3 4.1	\$ 120.6 4.9
	\$	156.9	\$	142.4	\$ 125.5

#### 2016 Compared to 2015

Other noncurrent assets increased by \$14.5 million in 2016. This change is largely attributable to increased investments amounting to \$14.8 million during the year due to transfers of cash and cash equivalents to long-term securities.

#### 2015 Compared to 2014

Other noncurrent assets increased by \$16.9 million in 2015. This change is largely attributable to increased investments amounting to \$17.7 million during the year due to transfers of cash and cash equivalents to long-term securities.

## **Deferred Outflows (in millions)**

	2016			2015	2014
Unamortized loss on refunding of bonds	\$	9.0	\$	9.8	\$ 10.4
	\$	9.0	\$	9.8	\$ 10.4

## 2016 Compared to 2015

The decrease in the deferred outflows balance of \$0.8 million is due to the current year amortization of the unamortized loss on refunding.

#### 2015 Compared to 2014

The decrease in the deferred outflows balance of \$0.6 million is due to the current year amortization of the unamortized loss on refunding.

## Liabilities

## **Current Liabilities (in millions)**

	2016			2015	2014		
Accounts payable and accrued expenses Accrued salaries and	\$	10.8	\$	11.8	\$	10.5	
compensated absences		33.2		30.6		29.9	
Current portion of long-term debt		4.6		4.5		4.4	
Due to market participants Generator noncompliance fines		395.8		342.3		448.8	
refund obligation		2.3		2.3		2.0	
	\$	446.7	\$	391.5	\$	495.6	

## 2016 Compared to 2015

Current liabilities at December 31, 2016 increased by \$55.2 million during the year. This increase is primarily due to higher amounts due to market participants as a result of increases in the balances of collateral accounts of \$40.5 million, new interconnection study deposits of \$8.6 million, non-refundable deposits pending distribution of \$3.0 million and market funds of \$2.2 million.

#### 2015 Compared to 2014

Current liabilities at December 31, 2015 decreased by \$104.1 million during the year. This decrease is primarily due to lower amounts held for generator interconnection study deposits of \$46.7 million and the distribution of non-refundable interconnection funds during the year amounting to \$62.4 million. The decrease is offset by increases in the balances of new project deposits and new non-refundable amounts. Collateral deposits were lower by \$28.6 million due to timing of the return of funds at year end and market funds were lower by \$31.2 million due to lower proceeds from annual congestion revenue rights auction.

## Long-Term Debt (in millions)

Summarized activity of long-term debt for the year ended December 31, 2016, is as follows:

		eginning of Year	(Pay	uances /ments/ rtization)	Enc	l of Year
CIEDB Revenue Bonds, Series 2013 Unamortized net premium	\$	187.4	\$	(4.5)	\$	182.9
Series 2013 bonds		9.1		(0.6)		8.5
Total long-term debt		196.5		(5.1)		191.4
Less: Current portion		4.5		0.1		4.6
Total long-term debt, net of current portion	\$	192.0	\$	(5.2)	\$	186.8

Summarized activity of long-term debt for the year ended December 31, 2015, is as follows:

		ginning of Year	(Pay	uances /ments/ rtization)	Enc	l of Year
CIEDB Revenue Bonds, Series 2013 Unamortized net premium	\$	191.8	\$	(4.4)	\$	187.4
Series 2013 bonds		9.8		(0.7)		9.1
Total long-term debt		201.6		(5.1)		196.5
Less: Current portion		4.4		0.1		4.5
Total long-term debt, net of current portion	\$	197.2	\$	(5.2)	\$	192.0

As of December 31, 2016, the Company had an underlying rating of A+ from S&P, A1 by Moody's and A+ by Fitch. Fitch rates the Company's outstanding Series 2013 bonds at AA- due to the additional support of the pledged deed of trust on the Company's primary building.

## 2016 Compared to 2015

At December 31, 2016 the Company had \$182.9 million of outstanding bonds issued through the California Infrastructure and Economic Development Bank (CIEDB). The decrease in long-term debt is primarily attributable to scheduled debt payments on the Series 2013 bonds in the amount of \$4.5 million in 2016.

## 2015 Compared to 2014

At December 31, 2015 the Company had \$187.4 million of outstanding bonds issued through the California Infrastructure and Economic Development Bank (CIEDB). The decrease in long-term debt is primarily attributable to scheduled debt payments on the Series 2013 bonds in the amount of \$4.4 million in 2015.

## **Other Noncurrent Liabilities (in millions)**

	:	2016	2015	2014
Employee retirement plan obligations	\$	21.3	\$ 21.5	\$ 22.1
	\$	21.3	\$ 21.5	\$ 22.1

## 2016 Compared to 2015

Other noncurrent liabilities at December 31, 2016 were lower by \$0.2 million. The decrease is primarily due to a lower post-retirement liability of \$0.5 million, offset by an increase of \$0.3 million in liabilities associated with other benefit plans.

## 2015 Compared to 2014

Other noncurrent liabilities at December 31, 2015 were lower by \$0.6 million. The decrease is primarily due to a lower post-retirement liability of \$0.9 million, offset by an increase of \$0.3 million in liabilities associated with other benefit plans.

## **Net Position (in millions)**

	2016			2015	2014
Net investment in capital assets Unrestricted	\$	23.2 111.3	\$	20.6 104.2	\$ 3.8 107.7
Total net position	\$	134.5	\$	124.8	\$ 111.5

## 2016 Compared to 2015

Net investment in capital assets at December 31, 2016 increased by \$2.6 million during the year. This change is primarily attributable to the commitment of additional funds for capital projects, offset by normal depreciation. The unrestricted component of the net position at December 31, 2016 increased by \$7.1 million during the year primarily as a result of net cash flows from operations.

## 2015 Compared to 2014

Net investment in capital assets at December 31, 2015 increased by \$16.8 million during the year. This change is primarily attributable to the commitment of additional funds for capital projects, offset by normal depreciation. The unrestricted component of the net position at December 31, 2015 decreased by \$3.5 million during the year primarily as a result of net cash flows from operations.

## **Changes in Net Position**

## Condensed Statements of Revenues, Expenses and Changes in Net Position (in millions)

	2016		2015		2016 2015 20		2014
Operating revenues Operating expenses	\$	212.0 195.7	\$	213.5 191.9	\$	213.7 205.9	
Operating income (loss)		16.3		21.6		7.8	
Other expenses, net		(6.5)		(8.3)		(7.3)	
Change in net position	\$	9.8	\$	13.3		0.5	

## **Operating Revenues**

#### 2016 Compared to 2015

Total operating revenues decreased during the year by \$1.5 million. This is primarily due to a decrease in GMC revenues of \$3.5 million due to a reduced revenue requirement, partially offset by higher other revenues of \$2.0 million primarily due to increased EIM administrative charges.

## 2015 Compared to 2014

Total operating revenues decreased during the year by \$0.2 million. This is primarily due to a decrease in GMC revenues of \$1.0 million due to reduced volumes subject to GMC during the year, partially offset by higher other revenues of \$0.6 million primarily due to increased EIM administrative charges.

## **Operating Expenses and Percentages (dollars in millions)**

	2016	2015	2014
Salaries and related benefits	\$ 115.5	\$ 113.0	\$ 109.0
Communication and technology costs	20.0	20.1	21.1
Legal and consulting costs	22.9	21.3	23.8
Leases, facilities and other administrative costs	12.5	13.2	12.3
Lease termination costs	1.0	-	-
Depreciation and amortization	 23.8	 24.3	39.7
	\$ 195.7	\$ 191.9	\$ 205.9
Salaries and related benefits	59 %	59 %	53 %
Communication and technology costs	10	10	10
Legal and consulting costs	12	11	12
Leases, facilities and other administrative costs	6	7	6
Lease termination costs	1	-	-
Depreciation and amortization	 12	 13	 19
	100 %	 100 %	100 %

## 2016 Compared to 2015

Operating expenses were \$3.8 million higher for the year ended December 31, 2016, compared to the year ended December 31, 2015. This is primarily due to higher salaries and related benefits of \$2.5 million as a result of merit and incentive compensation increases with no change in total budgeted headcount during the year, higher legal and consulting cost of \$1.6 million and to the lease termination cost of the Alhambra back-up facility of \$1.0 million. This was offset by decreases in other cost categories.

#### 2015 Compared to 2014

Operating expenses were \$14.0 million lower for the year ended December 31, 2015, compared to the year ended December 31, 2014. This is primarily due to the decrease in depreciation expense of \$15.4 million, as most of the market systems are now fully depreciated and to lower communication and technology and legal and consulting costs. This was offset by higher salaries and related benefits of \$4.0 million as a result of merit and incentive compensation increases with no change in total budgeted headcount during the year.

## Other Income (Expense), Net (in millions)

	2016		2015		2014	
Interest income Interest expense	\$	2.0 (8.5)	\$	0.9 (9.2)	\$	1.2 (8.5)
Total	\$	(6.5)	\$	(8.3)	\$	(7.3)

## 2016 Compared to 2015

Total other income increased by \$1.8 million for the year ended December 31, 2016 compared to the year ended December 31, 2015. This increase is attributable to \$1.1 million of higher interest income and \$0.7 million of lower interest expense. Rising short term interest rates and larger investment balances allowed for greater gross interest income in addition to lower unrealized losses on the market value of investments. The decrease in interest expense is primarily due to lower outstanding debt as a result of bond repayments.

#### 2015 Compared to 2014

Total other income decreased by \$1.0 million for the year ended December 31, 2015 compared to the year ended December 31, 2014. This decrease is attributable to \$0.3 million of lower interest income and \$0.7 million of higher interest expense. Rising short term interest rates and larger investment balances allowed for greater gross interest income, although these gains were offset by larger unrealized losses on the market value of investments. The increase in interest expense is primarily due to adjustments made to the generator refund liability.

(in thousands of dollars)

2016	2015	
Assets and deferred outflows		
Current assets		
Cash and cash equivalents, including restricted amounts \$ 363,	471 \$ 326,87	79
	629 17,26	
	431 52,07	
Other current assets6,	603 6,42	28
Total current assets 436,	134 402,64	15
Noncurrent assets		
Long-term investments, including restricted amounts 153,	116 138,30	)2
Fixed assets, net 187,		
Other assets 3,	809 4,09	95
Total noncurrent assets344,	096 317,41	0
Total assets 780,	230 720,05	55
Deferred outflows		
Unamortized loss on refunding of bonds 9,	025 9,71	3
Total deferred outflows 9,	025 9,71	3
Total assets and deferred outflows \$ 789,	255 \$ 729,76	8
Liabilities, deferred inflows and net position Current liabilities		
Accounts payable and accrued expenses \$ 10,	811 \$ 11,84	14
Accrued salaries and compensated absences 33,	170 30,60	)1
Current portion of long-term debt 4,	625 4,50	00
Due to market participants 395,	857 342,24	12
Generator noncompliance fines refund obligation 2,	262 2,31	6
Total current liabilities 446,	725 391,50	)3
Noncurrent liabilities		
Long-term debt, net of current portion 186,	767 192,03	39
Employee retirement plan obligations 21,	260 21,49	95
Total noncurrent liabilities 208,	027 213,53	34
Total liabilities 654,	752 605,03	37
Deferred inflows		-
Net position		
	215 20,52	25
Unrestricted 111,	288 104,20	)6
Total net position 134,	503 124,73	31
Total liabilities, deferred inflows and net position \$ 789,	255 \$ 729,76	8

# California Independent System Operator Corporation Statements of Revenues, Expenses and Changes in Net Position Years Ended December 31, 2016 and 2015

## (in thousands of dollars)

	2016	2015
Operating revenues GMC revenue Other revenues	\$ 193,200 18,811	\$ 196,718 16,734
Total operating revenues	 212,011	 213,452
Operating expenses Salaries and related benefits Equipment leases and facility costs Communications, technology and temporary staffing contracts Legal and consulting services Training, travel and professional dues Insurance, administrative and other expenses Lease termination costs	 115,531 3,061 20,008 22,898 3,495 6,011 975	112,995 2,973 20,141 21,297 4,353 5,799
Depreciation and amortization	23,749	 24,328 191,886
Total operating expenses Operating income from operations	 195,728 16,283	 21,566
Other income (expense) Interest income Interest expense Total other expense, net Change in net position	 1,981 (8,492) (6,511) 9,772	 913 (9,199) (8,286) 13,280
<b>Net position</b> Beginning of year	 124,731	 111,451
End of year	\$ 134,503	\$ 124,731

(in thousands of dollars)

	2016	2015
Cash flows from operating activities		
Receipts from scheduling coordinators for GMC	\$ 195,841	\$ 192,346
Other receipts	17,808	14,004
Payments to employees and to others for related benefits	(112,915)	(112,573)
Payments to vendors/others	(57,576)	(52,911)
Receipts from market participants	391,079	704,974
Payments to market participants	 (337,464)	 (811,545)
Net cash (used in)/provided by operating activities	 96,773	 (65,705)
Cash flows from capital and related financing activities		
Repayment of bonds	(4,500)	(4,415)
Purchases and development of fixed assets	(35,389)	(18,227)
Interest on debt	 (8,957)	 (9,063)
Net cash used in capital financing activities	 (48,846)	 (31,705)
Cash flows from investing activities		
Purchases of investments	(86,739)	(94,846)
Sales and maturities of investments	73,566	88,931
Interest received	 1,838	 880
Net cash used in investing activities	 (11,335)	 (5,035)
Net (decrease)/increase in cash and cash equivalents, restricted and unrestricted	36,592	(102,445)
Cash and cash equivalents, restricted and unrestricted		
Beginning of year	 326,879	 429,324
End of year	\$ 363,471	\$ 326,879

(in thousands of dollars)

	2016	2015
Supplemental information Cash paid for interest for bonds	\$ 8,957	\$ 9,063
Reconciliation of income from operations to net cash (used in)/provided by operating activities		
Operating income from operations Adjustments to reconcile income from operations to net cash (used in)/provided by operating activities	\$ 16,283	\$ 21,566
Depreciation and amortization	23,749	24,328
Lease termination costs Changes in operating assets and liabilities	975	-
Accounts receivable and other assets	1,891	(5,885)
Accounts payable and other accrued expenses	260	856
Due to market participants	 53,615	 (106,570)
Net cash (used in)/provided by operating activities	\$ 96,773	\$ (65,705)
Supplemental disclosure of noncash financing and investing activities		
Amortization of bond premium	\$ 647	\$ 663
Amortization of loss on refunding	(688)	(704)
Generator fines interest included in interest expense Change in purchases and development of fixed assets included in	54	(335)
accounts payable and accrued expenses	(117)	(615)

## 1. Organization and Operations

The Company is a nonprofit public benefit corporation incorporated in May 1997 that is responsible for ensuring the efficient and reliable use of one of the largest and most modern power grids in the world. The Company operates the transmission grid in most of California and a part of Nevada. It conducts comprehensive planning efforts and administers a competitive energy market for more than 160 market participants that provides open and non-discriminatory access to the transmission grid, and enables entities outside the transmission grid controlled by the Company to make efficient use of supply resources. The company also runs and energy imbalance market for several balancing authority areas in the western interconnection.

The Company's power market matches supply with demand, maintains operating reserves and allocates space on transmission lines for electricity deliveries. The Company operates a dayahead market for all twenty-four hours of the next operating day, and a real-time market, that includes the western energy imbalance market, that enables resources to schedule in 15 minute intervals with 5 minute dispatching. This market structure is the vehicle for providing open-access transmission service to users of the transmission grid. The market clears energy bids and offers short-term energy purchases and sales, thus enabling economic dispatch of generating resources to maintain continuous balance of supply and demand and management of congestion on the grid. The market also procures reserve capacity or ancillary services to maintain reliable operation under unexpected changes in grid conditions.

In addition, the Company also performs a settlement and clearing function by charging and collecting payments from users of these services and paying providers of such services. Cash held by the Company on behalf of market participants is recorded in a restricted asset account with a corresponding liability due to market participants in the statements of net position. Except for the retention of restricted assets noted above, the Company's financial statements reflect a net reporting of market activities wherein the financial statements do not include the revenues and expenses, cash flows, or assets and liabilities associated with the market transactions it facilitates. GMC revenues have a priority claim against any market-related receipts. Any market defaults are allocated to market participants.

The Company is regulated by the Federal Energy Regulatory Commission and complies with standards set by the North American Electric Reliability Corporation and the Western Electricity Coordinating Council. A five-member board of governors (the Board) appointed by the Governor of California and confirmed by the California State Senate governs the Company.

## 2. Summary of Significant Accounting Policies

## **Method of Accounting**

The accompanying financial statements have been prepared on an accrual basis of accounting in accordance with accounting principles for proprietary funds as prescribed by the Government Accounting Standards Board ("GASB"), and where not in conflict with GASB pronouncements, accounting principles prescribed by the Financial Accounting Standards Board ("FASB"). The Company uses the economic resources measurement focus and the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.

## **Net Presentation of Market Activity**

The Company is a central counterparty to the market transactions that it financially settles, with certain limited exceptions. The Company is a buyer to every seller and a seller to every buyer, but market participants are responsible for supplying electricity and other services to their customers. The Company's market participants are the primary obligors with respect to those obligations. In the event of a market default, the defaulted amount is allocated among market participants, in accordance with the tariff. Market participants. Accordingly, the Company's financial statements continue to reflect a net reporting of market activities and exclude the revenues and expenses, cash flows and assets and liabilities associated with the market transactions the Company facilitates.

## **Use of Estimates**

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect 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 revenues and expenses during the reporting period. Actual results could materially differ from those estimates.

## Cash and Cash Equivalents

Cash and cash equivalents, restricted and unrestricted, include cash in bank accounts, money market funds and other highly liquid investments with original maturities of three months or less. Cash and cash equivalents are unrestricted unless specifically restricted by bond indentures or the tariff.

## Accounts Receivable and Revenue Recognition

The GMC is based on rates filed with the Federal Energy Regulatory Commission and is designed to recover the Company's operating costs, capital expenditures, debt service costs, and to provide for an operating reserve. The GMC billings are recognized as revenue. The initial billings are based on estimated meter data submitted by market participants and therefore may be subject to adjustment over time to reflect the difference between actual meter data and initial estimates.

The GMC is comprised of the following three service categories: market services, system operations and congestion revenue rights services.

The operating reserve is calculated separately for each GMC service category and accumulates until the reserve becomes fully funded (at 15% of budgeted annual operating costs for each rate service category). At December 31, 2016, the operating reserve for each service category was fully funded. In accordance with the tariff, any surplus operating reserve balance is applied as a reduction in revenue requirements in the following year. The tariff requires GMC rates to be adjusted not more than once per quarter. The rate for a service category is adjusted if the difference in actual versus projected volumes used to set the rate is equal or greater than 2%, or if the difference in actual versus estimated annual revenues for the service category is equal or greater than \$1.0 million. During 2015, adjustments were made to certain GMC rates pursuant to these provisions. No adjustments were made in 2016.

In addition, the Company bills the participants of the EIM an administrative charge based on gross imbalance EIM volumes and at a rate that is developed annually to recover the ongoing costs of operating the EIM. The EIM administrative charge is included in other revenues of the Company.

## **Generator Interconnection Studies**

The Company is responsible for conducting generator interconnection studies at the request of project sponsors who are developing generating plants that would become connected to the transmission grid operated by the Company. The project sponsors are required to make a deposit before any studies are performed. Sponsors may withdraw their projects from the studies at any time.

In accordance with the tariff, the Company charges the project sponsors the actual costs of the studies. Related study costs include both internal costs and external costs and are recorded, when incurred, as operating expenses. As costs are incurred, the Company recognizes revenue for the same amount, which is recorded as a component of other revenues. The Company applies the deposits against the related receivable as costs are incurred. Certain deposits related to projects abandoned by the project sponsors are retained by the Company and distributed in accordance with the tariff. These distributions do not result in revenues or expenses recognized by the Company.

## **Generator Noncompliance Fines**

From December 8, 2000 through June 30, 2001, the Company assessed noncompliance fines on participating generators that failed to fully comply with dispatch instructions when the Company was seeking to prevent an imminent or threatened system emergency. In accordance with the tariff, these fines are retained by the Company. The Company recorded the net realizable amount of such fines as revenue when the underlying noncompliance event occurred. However, the amount of the fines, which were based on the price of energy at the time, has changed over time in response to developments in the still ongoing litigation over the California electricity crisis that have changed those prices. The Company adjusts such amounts in recognition of these developments, which affect the ultimate recognition of the fines charged and payments of the liability.

## Investments

Investments, the use of which is either unrestricted or restricted, include instruments with original maturities of greater than three months or, in the case where instruments have no stated maturity, when the holding period is intended to be long-term in nature. These investments include U.S. government and agency securities, corporate bonds, and equity and fixed income mutual funds. Income on investments and the gain or loss on the fair value of investments is recorded as a component of interest income.

## **Fixed Assets**

Fixed assets are recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of assets. Most of the Company's investment in fixed assets consists of the headquarters building and the newly constructed backup facility, both of which are being depreciated over twenty to thirty years, and information systems, which are being depreciated over three to seven years. The cost of improvements to or replacement of fixed assets is capitalized. Interest incurred during development is capitalized. When assets are retired or otherwise disposed of, the cost and related depreciation are removed from the accounts and any resulting gain or loss is reflected in the Company's statement of changes in revenues, expenses and changes in net position for the period. Repair and maintenance costs are expensed when incurred. The Company capitalizes direct costs of salaries and certain indirect costs to develop or obtain software for internal use. Costs related to software development during the preliminary stage of a project and training and maintenance costs are expensed as incurred. Costs related to abandoned projects are expensed when the decision to abandon is made.

## **Other Assets**

Other assets include certain employee retirement plan trust accounts.

#### **Compensated Absences**

The Company accrues vacation leave when the employee becomes eligible for the benefit. The Company does not record sick leave or other leave as a liability since there are no cash payments for sick leave or other leave made when employees terminate or retire. At December 31, 2016 and 2015, the total accrued liability for vacation was \$8.8 million and \$8.5 million, respectively.

## **Income Taxes**

The Company is exempt from federal income tax under Section 501(c) (3) of the U.S. Internal Revenue Service (IRS) Code and is exempt from California State franchise income taxes.

#### **Net Position**

The Company classifies its net position into three components:

- Net Investment in capital assets This component consists of capital assets, net of accumulated depreciation reduced by the outstanding debt balances, net of unamortized debt expenses.
- **Restricted** This component consists of net assets with constraints placed on their use. Constraints include those imposed by debt covenants (excluding amounts considered in net capital, above) and by the Company's tariff and agreements with external parties.
- **Unrestricted** This component consists of net assets that do not meet the definition of "invested in capital, net of related debt" or "restricted".

The Company had no restricted component of the net position at December 31, 2016 or 2015.

## **Concentration of Credit Risk**

Financial instruments that subject the Company to credit risk consist primarily of accounts receivable relating to GMC billings due from market participants and cash and cash equivalents and investments.

Most of the Company's receivables are due from entities in the energy industry, including utilities, generation owners and other electricity market participants. For the years ended December 31, 2016 and 2015, approximately 50% and 51% of revenues, respectively, were from two market participants.

GMC revenues have a priority claim against any market-related receipts, which means that even if an entity defaults on an invoice containing a GMC charge, the Company receives the full GMC so long as sufficient funds were received on other market invoices.

The Company's concentration of credit risk related to cash and cash equivalents, and investments is described in Note 3.

## New GASB Accounting Guidance

In June 2015, GASB introduced Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefit Plans Other Than Pensions*. The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits, or OPEB). This Statement replaces Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefit Plans Other Than Pension Plans*, and requires governments to report a liability on the financial statements for the OPEB they provide. This Statement also requires governments to present more extensive note disclosures and required supplementary information about their OPEB liabilities. This Statement is effective for the fiscal year ending December 31, 2018. Management is evaluating the effect that the implementation of this statement will have on the financial statements.

## 3. Cash and Cash Equivalents and Investments

## **Investment Policy**

The Company maintains an investment policy approved by its Board of Governors, which provides for the investment guidelines of the majority of the Company's unrestricted funds. The policy's guidelines address permissible investment types, credit risk, concentration of credit risk, interest rate risk, custodial credit risk and other investment portfolio parameters.

Restricted funds, such as bond proceeds and amounts due to market participants, are invested according to the Company's bond indentures and tariff, respectively, both of which are more restrictive than the investment policy. A portion of the Company's unrestricted funds, \$11.6 million as of December 31, 2016, has been designated by the Company as assets related to the liabilities associated with the Company's Retiree Medical Plan. These assets are governed by a separate investment policy approved by the Board of Governors which is aligned with the Company's long-term pension obligations to fund postretirement health benefits.

## **Credit Risk**

To mitigate the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment, the Company limits purchases of investments to those rated at the time of purchase by two of the following nationally recognized statistical rating organizations: Standard & Poor's, Moody's, and Fitch. The investment must have at least two ratings that meet a minimum rating of at least A-1 (or equivalent) for short-term obligations such as commercial paper and at least A- (or equivalent) for longer term obligations like corporate medium-term notes. In the event of split ratings, the lowest rating is considered the overall credit rating. Exceptions exist in the investment policy that allow the Company to invest in certificates of deposit issued by lower rated banks up to the FDIC insured limit and to hold investments that have been downgraded below the policy rating minimums if approved to do so by the Company's internal investment committee.

In October 2016, the Securities and Exchange Commission (SEC) introduced new Money Market Fund rules. The new rules require the use of a floating net asset (NAV) for institutional prime money market funds and provide boards with the ability to impose liquidity fees, as well as implement redemption gates, for all non-governmental money market funds during periods of stress in the financial markets. Under normal circumstances a floating NAV money market fund investment would continue to meet the definition of a cash equivalent. However, in the event credit or liquidity issues arise causing a meaningful decrease of the money market investments below \$1.0000 per share the classification of such investments as cash equivalents may not be appropriate. There were no credit or liquidity issues that resulted in meaningful decreases in the Company's money market investments in 2016. Therefore, amounts invested in money market funds remain classified as cash equivalents.

## **Concentration of Credit Risk**

This is the risk of loss associated with the percentage of an entity's investment in a single issuer. The Company's investment policy limits investments in any single issuer to no more than 5% of the portfolio, with exceptions relating to obligations issued by or fully guaranteed as to principal and interest by the United States, federal agencies or United States government sponsored enterprises, pooled investments such as money market funds, and investments procured in connection with Company bond offerings. As of December 31, 2016, other than the security exceptions described above, the Company had no investments in any one issuer representing more than 5% of total cash and cash equivalents and investments.

## **Custodial Credit Risk**

Custodial credit risk is the risk that, in the event of the failure of a depository financial institution or counterparty, the Company will not be able to recover the value of its deposits, investments or collateral securities that are in the possession of an outside party.

The Company may maintain balances in bank accounts exceeding the FDIC insured level of \$250,000. In the event of a bank default, the Company's deposits may not be returned. The Company had unrestricted noninterest-bearing bank deposits in amounts of \$0.6 million and \$5.2 million at December 31, 2016 and 2015, respectively. Additionally, the Company had restricted noninterest-bearing bank deposits in amounts of \$1.8 million and \$4.8 million at December 31, 2016 and 2015, respectively. All other investments purchased by the Company, by policy, are held in custodial accounts by third-party custodians and are registered in the Company's name, thereby minimizing any custodial credit risk.

## **Interest Rate Risk**

Changes in interest rates may adversely affect the fair value of the Company's investments and its cash flows. The nature of the Company's investment needs and cash flows requires the majority of its investments to have maturities of one year or less. The investment policy further limits the maximum maturity of any investment to five years with the exception of bond proceeds and the assets associated with the Retiree Medical Plan liabilities. The fair value of the resulting short-term investment portfolio is therefore, less affected by rising interest rates. The cash flows from short-term portfolios can be more affected by declining interest rates as maturing investments are reinvested at lower interest rates.

## **Summary of Balances**

At December 31, 2016, the Company's cash, cash equivalents and investments consist of the following (in thousands):

······································					
		Less		urities (in Years) More	
Description	Credit Rating*	than 1	1 - 5	than 5	Total
Cash and cash equivalents - unrestricted					
Deposits		\$ 6,227	\$-	\$ -	\$ 6,227
Money Market Funds	AAAm	17,861			17,861
Commercial Paper	A-1	1,000			1,000
·		25,088	-	-	25,088
Cash and cash equivalents - restricted					
Deposits		9,687			9,687
Money Market Funds	AAAm	328,696			328,696
		338,383		-	338,383
Total cash and cash equivalents		363,471	·		363,471
Short term investments - unrestricted					
Certificate of Deposits	FDIC Insured	3,524			3,524
Government-sponsored Enterprises	AAA	2,002			2,002
Government-sponsored Enterprises	AA+	12,159			12,159
Government-sponsored Enterprises	A-1	1,000			1,000
U.S Treasury	AA+	11,007			11,007
Corporate Notes	AA-	1,000			1,000
Corporate Notes	A+	1,270			1,270
Corporate Notes	A	3,539			3,539
Corporate Notes	A-	1,044			1,044
Corporate Notes	Unrated	1,001			1,001
Commercial Paper	A-1	1,000			1,000
		38,546	-	-	38,546
Short term investments - restricted					
Certificate of Deposits	FDIC Insured	11,885			11,885
Total short-term investments	I DIC Insuled	50,431	·		50,431
					00,401
Long-term investments - unrestricted	Unrated			27	37
Affinity Insurance Ltd.			4.440	37	
Certificate of Deposits	FDIC Insured		4,110		4,110
Mutual Funds	Unrated		11,554		11,554
U.S. Treasury	AA+		34,880		34,880
Government-sponsored enterprises	AAA		1,008		1,008
Government-sponsored enterprises	AA+		30,983		30,983
Corporate Notes	AAA		996		996
Corporate Notes	AA+		987		987
Corporate Notes	AA		1,574		1,574
Corporate Notes	AA-		4,773		4,773
Corporate Notes	A+		2,958		2,958
Corporate Notes	A		5,102		5,102
Corporate Notes	A-		4,788		4,788
Corporate Notes	BBB		1,049		1,049
Long-term investments - restricted		-	104,762	37	104,799
Certificate of Deposits	FDIC Insured		48,317		48,317
Total long-term investments		-	153,079	37	153,116
Total cash, cash equivalents and i	nvestments	\$ 413,902	\$ 153,079	\$ 37	\$ 567,018

\* Represents S&P rating.

# California Independent System Operator Corporation Notes to Financial Statements December 31, 2016 and 2015

At December 31, 2015, the Company's cash, cash equivalents and investments consist of the following (in thousands):

				Ren	naining Mat	urities	(in Years)		
		Less					More		
Description	Credit Rating*	than 1		1 - 5		than 5		Total	
Cash and cash equivalents - unrestricted									
Deposits		\$	4,774	\$	-	\$	-	\$	4,774
Money Market Funds	AAAm		25,717		-		-		25,717
			30,491		-		-		30,491
Cash and cash equivalents - restricted									
Deposits			5,296		-		-		5,296
Money Market Funds	AAAm		291,092		-		-		291,092
			296,388		-		-		296,388
Total cash and cash equivalents			326,879		-		-		326,879
Short term investments - unrestricted									
Certificate of Deposits	FDIC Insured		4,575		-		-		4,575
Government-sponsored Enterprises	AA+		9,508		-		-		9,508
U.S Treasury	AA+		11,035		-		-		11,035
Corporate Notes	AA-		5,017		-		-		5,017
Corporate Notes	A+		2,006		-		-		2,006
Corporate Notes	А		4,502		-		-		4,502
Corporate Notes	A-		2,215		-		-		2,215
Corporate Notes	BBB+		1,006		-		-		1,006
Commercial Paper	Unrated		998		-		-		998
			40,862		-		-		40,862
Short term investments - restricted									
Certificate of Deposits	FDIC Insured		11,210		-		-		11,210
Total short-term investments			52,072		-		-		52,072
Long-term investments - unrestricted									
Affinity Insurance Ltd.	Unrated		-		-		37		37
Certificate of Deposits	FDIC Insured		-		2,918		-		2,918
Mutual Funds	Unrated		-		10,155		-		10,155
U.S. Treasury	AA+		-		40,985		-		40,985
Government-sponsored enterprises	AAA		-		1,997		-		1,997
Government-sponsored enterprises	AA+		-		23,393		-		23,393
Corporate Notes	AAA		-		1,002		-		1,002
Corporate Notes	AA+		-		982		-		982
Corporate Notes	AA		-		1,608		-		1,608
Corporate Notes	AA-		-		2,891		-		2,891
Corporate Notes	A+		-		3,269		-		3,269
Corporate Notes	А		-		3,630		-		3,630
Corporate Notes	A-		-		4,140		-		4,140
Corporate Notes	Unrated		-		1,001		-		1,001
			-		97,971		37	_	98,008
Long-term investments - restricted									
Certificate of Deposits	FDIC Insured		-		40,294		-		40,294
Total long-term investments			-		138,265		37		138,302
Total cash, cash equivalents and	nvestments	\$	378,951	\$	138,265	\$	37	\$	517,253

\* Represents S&P rating.

# California Independent System Operator Corporation Notes to Financial Statements December 31, 2016 and 2015

The Company's cash, cash equivalents and investments at December 31 consist of unrestricted and restricted funds as follows (in thousands):

	2016	2015
Unrestricted funds, operating account Restricted funds	\$ 168,433	\$ 169,361
Market participants Series 2013 Bond Proceeds	395,358 3,227	341,219 6,673
	\$ 567,018	\$ 517,253

Cash, cash equivalents and investments restricted for market participants consist of the following at December 31 (in thousands):

	2016	2015	
Security deposits	\$ 246,583	\$ 206,060	
Market funds pending settlement	63,648	61,436	
Pass-through fees due to others	8,856	9,074	
Generator interconnection study deposits	68,401	59,759	
Non-refundable deposits pending distribution	 7,870	 4,890	
Total amounts restricted for market participants	\$ 395,358	\$ 341,219	

Cash, cash equivalents and investments restricted for market participants consist of amounts held by the Company to be remitted to market participants or others on their behalf. Security deposits are amounts received from market participants who are required to post collateral for their transactions in the Company's markets. Market funds pending settlement consist of amounts collected during the settlement and clearing function that will pass-through to market participants in subsequent periods. Pass-through fees due to others consist of amounts collected from market participants that will be paid to market participants for summer reliability, startup costs and emission costs. Generator interconnection study deposits are amounts collected for future studies. Non-refundable deposits consist of interconnection amounts which are non-refundable to project sponsors in accordance with tariff requirements.

## 4. Fixed Assets

Changes in the Company's fixed assets for the year ended December 31, 2016, are as follows (in thousands):

	2015	_	dditions and ransfers In	isposals and ransfers Out	2016
Nondepreciable fixed assets					
Land	\$ 9,098	\$	1,454	\$ -	\$ 10,552
Work-in-progress	 13,111		35,908	 (35,505)	 13,514
	22,209		37,362	(35,505)	24,066
Depreciable fixed assets					
Regional transmission operator software	395,244		11,231	(7,757)	398,718
Regional transmission operator hardware	27,734		639	(268)	28,105
Communication equipment	9,388		1,481	(53)	10,816
ISO Facilities (HQ and Lincoln)	143,817		20,018	-	163,835
Furniture, fixtures and other	 15,179		682	 (130)	 15,731
	591,362		34,051	(8,208)	617,205
Less: Accumulated depreciation	 (438,558)		(23,749)	 8,207	 (454,100)
	 152,804		10,302	 (1)	 163,105
Total fixed assets, net	\$ 175,013	\$	47,664	\$ (35,506)	\$ 187,171

Changes in the Company's fixed assets for the year ended December 31, 2015, are as follows (in thousands):

	2014	 dditions and ransfers In	isposals and ransfers Out	2015
Nondepreciable fixed assets				
Land	\$ 9,098	\$ -	\$ -	\$ 9,098
Work-in-progress	 4,128	 19,045	 (10,062)	 13,111
	13,226	19,045	(10,062)	22,209
Depreciable fixed assets				
Regional transmission operator software	389,605	8,571	(2,932)	395,244
Regional transmission operator hardware	29,092	426	(1,784)	27,734
Communication equipment	8,593	839	(44)	9,388
ISO Facilities (HQ and Alhambra)	143,817	-	-	143,817
Furniture, fixtures and other	 14,952	 227	 -	15,179
	586,059	10,063	(4,760)	591,362
Less: Accumulated depreciation	 (418,989)	 (24,328)	 4,759	 (438,558)
	 167,070	 (14,265)	 (1)	 152,804
Total fixed assets, net	\$ 180,296	\$ 4,780	\$ (10,063)	\$ 175,013

The Company capitalized interest related to the development of fixed assets of \$0.4 million and \$0.2 million for the years ending December 31, 2016 and 2015, respectively.

## 5. Generator Noncompliance Fines

In 2000 and 2001, the Company billed generator noncompliance fines to market participants, of which the Company collected \$60.7 million. Generally, these fines were assessed at a rate corresponding to twice the highest price paid in the Company's markets for energy. Because the prices for this period are being adjusted as a result of the Federal Energy Regulatory Commission Refund Case, as described in Note 12, the amount of the fines to be retained by the Company is being reduced, with any surplus collections being refunded with interest to market participants. The Company accrues interest in accordance with rulings of the Federal Energy Regulatory Commission on the portion of fines collected in excess of the estimated realizable amount, which is to be refunded to market participants when the amounts are settled. The ultimate settlement of fines is expected after the conclusion of the proceedings in the Federal Energy Regulatory Commission Refund Case and the financial settlement of the California Power Exchange (Cal PX).

Based on estimates of the mitigated energy prices, the Company recorded fine revenues totaling \$29.5 million as opposed to the \$60.7 million collected, resulting in a refund liability of \$31.2 million before interest. The Company reduced its refund liability (and associated interest obligation) by distributing funds to market participants that approximately equal its refund liability in connection with settlement agreements approved by the Federal Energy Regulatory Commission, including a distribution of \$43.9 million in 2010.

Each year, the Company adjusts its estimated refund liability based on updated information it obtains related to interest and other factors that will serve to change the estimated amount of generator fine proceeds the Company will ultimately retain, which consequently modifies the generator fine collections that will be returned to market participants

Based on estimates obtained in 2016 from parties involved in these proceedings and an updated estimate of the proportionate allocation of shortfalls to the Company in 2016, there was a decrease in the estimated liability of \$54 thousand. As of December 31, 2016, the Company estimates the remaining liability (including interest) related to generator noncompliance fines to be \$2.3 million.

There are significant uncertainties associated with the final settlement of generator noncompliance fines. While management's estimated liability at December 31, 2016 is based on the best information available, adjustments are likely to occur in the future to the estimated liability associated with interest and other shortfalls that will be incurred by the Cal PX, and allocated to the Company in connection with final disposition of the funds and obligations arising from the events of 2000 and 2001.

## 6. Long-term Debt and Related Agreements

Long-term debt consists of the following at December 31 (in thousands):

	2016	2015
CIEDB Revenue Bonds, Series 2013 Fixed interest rates of 2.00% - 5.25% with maturities through 2039	\$ 182,905	\$ 187,405
Unamortized net premium Series 2013 bonds	8,487	9,134
	 ,	 ,
Total long-term debt	191,392	196,539
Less: Current portion	 (4,625)	(4,500)
Total long-term debt, net of current portion	\$ 186,767	\$ 192,039

Summarized activity of long-term debt for the year ended December 31, 2016, is as follows (in thousands):

	Beç	ginning of Year	Pa	ayments	Er	nd of Year
CIEDB Revenue Bonds, Series 2013	\$	187,405	\$	(4,500)	\$	182,905
Total long-term debt	\$	187,405	\$	(4,500)	\$	182,905

Summarized activity of long-term debt for the year ended December 31, 2015, is as follows (in thousands):

	Beginning of Year		Pa	lyments	En	d of Year
CIEDB Revenue Bonds, Series 2013	\$	191,820	\$	(4,415)	\$	187,405
Total long-term debt	\$	191,820	\$	(4,415)	\$	187,405

# California Independent System Operator Corporation Notes to Financial Statements December 31, 2016 and 2015

Scheduled future debt service payments for these bonds as of December 31, 2016, are as follows (in thousands):

	P	Principal		Interest	Total		
2017	\$	4,625	\$	8,825	\$	13,450	
2018		4,765		8,655		13,420	
2019		4,970		8,456		13,426	
2020		5,165		8,242		13,407	
2021		5,395		8,005		13,400	
2022 – 2039		157,985		81,458		239,443	
	\$	182,905	\$	123,641	\$	306,546	

The Series 2013 bonds are supported by a pledge of the Company's revenues and operating reserves. In addition, the bonds are supported by a deed of trust on the Company's headquarters building and land.

Interest expense recorded by the Company related to long-term debt includes interest paid on the bonds (net of interest capitalized to fixed assets) and amortization of the bond premium.

## 7. Derivative Financial Instrument – CRRs

As described in Note 2, the Company is the central counterparty to market participant transactions which includes Congestion Revenue Rights (CRRs). CRRs are financial instruments that enable market participants to reduce their congestion-related price risk when delivering or selling energy on the grid. A CRR provides an economic hedging mechanism against congestion charges that can be transacted by market participants separately from transmission service. These instruments are considered derivative financial instruments for accounting purposes, which would require presentation at fair value if they were recognized as assets and liabilities of the Company.

Consistent with its role in facilitating other market transactions, the Company facilitates the allocation, auctioning and ultimate settlement of CRRs in its market, but does not have economic risks and rewards associated with these financial instruments. Any market defaults are allocated to market participants. As such they are not recognized as assets and liabilities in the Company's statements of net position. However, unlike other market transactions administered by the Company, CRRs can be outstanding for extended periods of time. At December 31, 2016, the average life of the Company's CRRs was 3.9 years and there were a total of 90 CRR holders, compared to 3.1 years and 86 CRR holders at December 31, 2015. The estimated net fair value of both the CRR assets and liabilities as of December 31, 2016 was \$512.9 million related to a total of 839,184 megawatts, which vary in length from one month to several years. This is compared to \$590.4 million related to a total of 757,291 megawatts at December 31, 2015. The value of each megawatt of CRR is a function of numerous factors including the length of period the CRR covers.

While these amounts are not presented in the statements of net position, their estimated net fair value is disclosed for informational purposes given their longer term nature. Their fair value was determined based on several factors including actual auction prices transacted in the most recent annual and monthly auction processes, the Company's models which calculate the estimated value of all transmission constraints, net present value discounting and other factors. In addition to the high level of uncertainty associated with these inputs to the valuation calculation model, changes to actual or anticipated flows and constraints on the transmission system managed by the Company

# California Independent System Operator Corporation Notes to Financial Statements December 31, 2016 and 2015

or in the value of electricity flowing on the transmission system create volatility that can significantly affect CRR values. Changes in generation, load, weather, and transmission outages are other factors that can have immediate and significant impact on CRR values.

The following is a summary of CRR megawatts, by type, outstanding at December 31, 2016:

Type (in Megawatts)	
Monthly (January 2017)	79,691
Annual (February - December 2017)	450,680
Long Term (January 2017 - December 2026)	308,813
	839,184

The following is a summary of CRR megawatts, by type, outstanding at December 31, 2015:

Type (in Megawatts)	
Monthly (January 2016)	71,079
Annual (February - December 2016)	417,952
Long Term (January 2016 - December 2025)	268,260
	757,291

## 8. Fair Value of Financial Instruments

Accounting guidance for fair value measurement requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard establishes a three-tier fair value hierarchy based on the level of independent, objective evidence surrounding the inputs used to measure fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is as follows:

Level 1: Applies to assets or liabilities for which there are quoted prices in active markets that are accessible at the measurement date for identical unrestricted assets or liabilities.

Level 2: Applies to assets or liabilities for which there are inputs other than quoted prices that are observable for the asset or liability such as quoted prices for similar assets or liabilities in active markets; quoted prices for identical assets or liabilities in markets with insufficient volume or infrequent transactions (less active markets); or model-derived valuations in which significant inputs and significant value drivers are observable or can be derived principally from, or corroborated by, observable market data.

Level 3: Applies to assets or liabilities for which there are unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of the assets or liabilities.

The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability. Financial assets and liabilities are classified in their entirety based on the level of input that is considered most significant to the fair value measurement.

The Company's assets measured at fair value on a recurring basis at December 31, 2016, were as follows (in thousands):

	Total	Level 1	Level 2	Le	evel 3
Cash:	\$ 15,914	\$ -	\$ -	\$	-
Cash equivalents:					
Money market funds	346,557	346,557			
Corporate debt securities	1,000		1,000		
Short-term investments:					
U.S. Treasury securities	11,007		11,007		
U.S. government agency securities	15,162		15,162		
Negotiable certificates of deposit	15,408		15,408		
Corporate debt securities	8,854		8,854		
Long-term investments:					
U.S. Treasury securities	34,880		34,880		
U.S. government agency securities	31,991		31,991		
Negotiable certificates of deposit	52,427		52,427		
Corporate debt securities	22,227		22,227		
Publicly traded mutual funds	11,554	11,554			
Captive insurance investment	 37				37
	\$ 567,018	\$ 358,111	\$ 192,956	\$	37

The Company's assets measured at fair value on a recurring basis at December 31, 2015, were as follows (in thousands):

	Total	Level 1	Level 2	L	evel 3
Cash:	\$ 10,070	\$ -	\$ -	\$	-
Cash equivalents:					
Money market funds	316,809	316,809			
Short-term investments:					
U.S. Treasury securities	11,035		11,035		
U.S. government agency securities	9,508		9,508		
Negotiable certificates of deposit	15,785	15,785			
Corporate debt securities	15,744		15,744		
Long-term investments:					
U.S. Treasury securities	40,985		40,985		
U.S. government agency securities	25,390		25,390		
Negotiable certificates of deposit	43,212	43,212			
Corporate debt securities	18,523		18,523		
Publicly traded mutual funds	10,155	10,155			
Captive insurance investment	 37		 37		
	\$ 517,253	\$ 385,961	\$ 121,222	\$	-

Level 1 money market funds and publicly traded mutual funds are determined by using quoted prices in active markets. Level 2 fixed income securities are priced using quoted market prices for similar instruments or nonbinding market prices that are corroborated by observable market data. Level 3 assets are non-negotiable instruments which require the use of unobservable inputs in determining fair value.

The fair value of the employee retirement plan trust accounts at December 31, 2016 and 2015 was \$2.7 million and \$2.5 million, respectively. These accounts are invested in cash equivalents and publicly traded mutual funds and are classified as Level 1 assets.

The fair value of the Company's long-term debt as of December 31, 2016 and 2015 was \$203.0 million and \$210.8 million respectively. The fair value of fixed rate long-term debt, which includes the short-term portion, is based on current market quotes which are classified as a Level 2 on the fair value hierarchy at both December 31, 2016 and 2015.

The carrying values reported in the balance sheet for current assets and liabilities, excluding amounts discussed above, approximate fair value.

Additionally, the Company had \$9.5 million and \$9.0 million at December 31, 2016 and 2015, respectively, in trust related to the post-employment medical benefit plan (see Note 9). At December 31, 2016 and 2015, these trust assets consist primarily of mutual funds and are classified as Level 1 within the fair value hierarchy.

## 9. Employee Benefit Plans

The Company maintains a number of employee benefit plans. A description of the plans and key provisions is included below. Obligations included in the Company's statements of net position related to these plans consist of the following at December 31 (in thousands):

	2016		2015
Post-employment medical benefit plan Executive pension restoration plan	\$ 18,526 1.675	\$	19,043 1.624
Executive savings plan	 1,059	_	828
Total employee retirement plan obligations	\$ 21,260	\$	21,495

## **Post-Employment Medical Benefit Plan**

## Plan Description

The Company sponsors the California ISO Retirees Medical Plan, a defined benefit plan, to provide post-employment health care benefits to all eligible employees who retire from the Company on or after attaining age 60. The required years of service to qualify for plan benefits is five years for employees hired prior to January 1, 2013 and ten years for employees hired on or after January 1, 2013. Depending on years of service, the Company pays between 60% and 70% of the premiums on the coverage elections made by the beneficiaries not to exceed \$8,000 per year for individual retiree coverage and \$16,000 per year for retiree plus spouse and/or dependent. Plan benefits are available to eligible retirees and to their spouses, domestic partners and eligible dependents, as provided for under the terms of the plan. Current plan coverage extends for the lifetime of the participants and their beneficiaries, except for dependents, which generally terminates at age 26. There are 40 active employees and 61 retirees eligible to receive benefits pursuant to the plan as of December 31, 2016.

Effective January 1, 2015, the Company amended the Plan for its post-65 retirees and their post-65 dependents. The post-65 retirees and their post-65 dependents transitioned from the active group coverage to individual Medicare Supplemental plan programs. At the Company's discretion, the Plan provides a monthly amount per post-65 retiree and eligible post-65 dependents.

## Funding and Investment Policy

The Company has established a trust for the purposes of funding the plan. The trust was established as a tax-exempt voluntary employees' beneficiary association. All assets of the trust are to be used for the exclusive benefit of the participants and beneficiaries of the plan. Although the Company has fiscal accountability for these assets and holds them in a fiduciary capacity, the assets are not considered assets of the Company and are therefore not included in the statements of net position of the Company. As of December 31, 2016 and 2015, the trust assets were \$9.5 million and \$9.0 million, respectively.

The Company's current funding policy is to annually contribute an amount such that the total amount in the trust approximates the actuarially determined liability attributable to retirees and their spouses and to active participants who are fully eligible to retire. The Company does not provide funding into the trust related to future obligations associated with employees who have not become eligible to retire, although any excess investment returns remain in the trust. As part of its rate structure, the Company collects annual amounts associated with the future obligations and those

assets, while segregated, are reported in the Company's statements of net position. Based on its current funding policy, the trust is fully funded at December 31, 2016.

The assets of both the trust and the Company's segregated funds are invested in accordance with the Board approved California ISO Retirees Medical Plan Investment Policy. In general, the assets are invested in a mix of equity and fixed income mutual funds.

## Annual Other Post-Employment Benefits (OPEB) Cost and Net OPEB Obligation

The Company's annual OPEB cost for the California ISO Retirees Medical Plan is calculated based on the annual required contribution (ARC) of the employer, an amount actuarially determined in accordance with GASB Statement No. 45 "*Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*". The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal costs each year and to amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed 15 years (using the level dollar open method). The ARC is adjusted for the amortized amount of the discounted present value (ordinary annuity) of the balance of the net OPEB obligation at the beginning of the year.

The Company's annual OPEB cost at December 31, 2016 and 2015 and for the years then ended, is as follows (in thousands):

	2016	2015
Annual required contribution	\$ 576	\$ 197
Interest on net OPEB obligation Adjustment to annual required contribution	1,123 (1,948)	1,246 (2,086)
Annual OPEB (benefit)/cost	 (249)	 (643)
Contributions made	 (268)	 (243)
Decrease in net OPEB obligation	(517)	(886)
Net OPEB obligation Beginning of year	19,043	 19,929
End of year	\$ 18,526	\$ 19,043

The Company's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and net OPEB obligation for the years ended December 31, 2016, 2015 and 2014 were as follows (in thousands):

Year Ended	nnual ost/(Benefit)	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
2014	\$ 233	104 %	\$ 19,929
2015	(643)	(38)%	19,043
2016	(249)	(108)%	18,526

## Actuarial Methods and Assumptions

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

The following significant actuarial methods and assumptions were used in the calculation of annual OPEB cost for the year ending December 31, 2016.

Valuation date	January 1, 2016
Actuarial cost method	Projected unit credit
Amortization method	Level dollar, open
Remaining amortization period	15 years
Asset valuation method	Market
Investment rate of return	5.90%
Healthcare cost trend rate	6.50% initial,5.0% ultimate
Morbidity	1.00%

The projection of future benefit payments for an ongoing plan involves estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

The schedule below reflects multiyear trend information to show the status of funding based on the actuarial value of plan assets relative to the actuarial accrued liabilities. This information is required supplementary information (dollars in thousands):

Actuarial Valuation Date	Actuarial Value of Assets (a)		APBO (b)		Unfunded APBO (b - a)		Funded Ratio (a/b)
January 1, 2015 January 1, 2016	\$	9,074 8,991	\$	6,738 9,059	\$	(2,336) 68	135 % 99 %
January 1, 2017		9,525		21,107		11,582	45 %

The Accumulated Postretirement Benefit Obligation (APBO) increased by \$12.0 million between 2017 and 2016. This increase is primarily due to changes in plan assumptions, which increased the liability by \$11.0 million, and the actuarial loss during the period of \$0.2 million and to normal cost during the period.

The actuarial valuation as of January 1, 2017, incorporated changes to actuarial assumptions which are different from the assumptions used in the calculation of the annual pension costs for the year ending December 31, 2016. Such changes included the full adoption of the latest industry mortality table based on 2016 scales, a revised retirement rate, a change in health care cost assumptions to reflect recent trends in medical costs and an update on the monthly employer contributions to post-65 retiree health retirement accounts (HRA), increasing at 5% annually. The change in the HRA contribution assumption contributed to the majority of the increase in the APBO.

The actuarial valuation as of January 1, 2016, incorporated changes to actuarial assumptions which are different from the assumptions used in the calculation of the annual pension costs for the year ending December 31, 2015. Such changes included a decrease in the investment rate of return from 6.25% to 5.90% based on future forecasted earnings that are projected to provide lower forward returns overall, the full adoption of the latest industry mortality table based on 2015 scales and a change in health care cost assumptions. The change in the health care cost assumptions contributed to the majority of the increase in the APBO.

## **Executive Pension Restoration Plan**

The Company sponsors the Executive Pension Restoration Plan, a nonqualified defined contribution plan, which allows certain officers of the Company to make contributions and receive Company contributions in excess of the 401(k) contribution limits set forth by IRS regulations as described in the retirement savings benefits plan below.

The contributions and earnings thereon are held in a trust and the balances as of December 31, 2016 and 2015, were \$1.7 million and \$1.6 million, respectively, and are included in Other Assets with a corresponding liability in Employee Retirement Plan Obligations. In connection with this plan, the Company recognized expenses for contributions of \$179,000 and \$77,000 in 2016 and 2015, respectively.

## **Executive Savings Plan**

The Company sponsors the Executive Savings Plan, a nonqualified defined contribution plan under section 457(b) of the IRS Code. The Company contributes a percentage of each officer's annual base compensation to the plan. Officers may elect to make voluntary contributions, subject to statutory limitations. The contributions and earnings thereon are held in a trust and the balance as of December 31, 2016 and 2015 was \$1.1 million and \$0.8 million, respectively, and are included in Other Assets, with a corresponding liability in Employee Retirement Plan Obligations. In connection with this plan, the Company recognized expenses of \$131,000 and \$121,000 in 2016 and 2015, respectively.

## **Retirement Savings Benefits Plan**

The Company sponsors a defined contribution retirement plan, the California ISO Retirement Savings Benefits Plan (the Retirement Plan) that is subject to the provisions of the Employee Retirement Income Security Act of 1974 and covers substantially all employees. The Retirement Plan is administered by the Company with the assistance of a third party. The assets of the plan are held separately from Company assets and are not combined with the assets in the statements of net position.

Employees may elect to contribute up to fifty percent of their eligible compensation to the Retirement Plan, subject to statutory limitations. The Company matches contributions up to six percent of an employees' eligible compensation and an additional contribution equal to five percent of eligible compensation for employees with less than five years of service, or seven percent for employees who have at least five years but not more than ten years of service. An additional contribution of one percent of eligible compensation is also made by the Company for each five year increment of service after an employees' ten year anniversary.

Employee contributions to the Retirement Plan for 2016 and 2015 were \$7.5 million and \$8.4 million, respectively. The Company contributions to the Retirement Plan for 2016 and 2015 were \$9.3 million and \$9.4 million, respectively.

## 10. Insurance Programs and Claims

The Company is exposed to various risks of loss related to torts; theft, damage to, and destruction of assets; errors and omissions; nonperformance of duty; injuries to employees; and natural disasters. The Company maintains various commercial and mutual insurance plans that provide coverage for most claims in excess of specific dollar thresholds. Primary insurance policies have coverage limits set based on the Company's assessment of reasonable exposure within that risk category, with consideration of insurance types and coverage limits for comparable entities. Additionally, the Company maintains excess liability coverage that provides umbrella coverage for certain exposures. Losses incurred below insurance deductibles are expensed as incurred. In the last three years, the Company did not incur any claims in excess of the coverage described above.

The Company is a participant in a group captive insurance company for workers compensation insurance coverage. The Company's annual net insurance costs for such coverage vary based on claims incurred at the Company, and to a lesser extent, claims activity of other members of the captive insurance company. The Company's annual insurance expense is limited through reinsurance and risk sharing arrangements of the captive to an additional percentage of the initial base premium paid.

## 11. Lease Commitments

The Company has long-term operating leases that expire at various times through 2030.

The following are the future minimum payments under these agreements as of December 31, 2016 (in thousands):

2017	\$	603
2018		186
2019		190
2020		195
2021–2030	2	,198
	\$ 3	,372

Lease costs of approximately \$0.8 million were charged to operating expense in 2016 and 2015, respectively.

The Company leases office space in Alhambra, which previously served as the backup operations center prior to the relocation, in December 2016, to the new constructed facility in Lincoln. The lease expires in August 2017. Although the Company is no longer using the leased space, the Company is required to pay monthly rent through August 2017, and other on-going costs associated with the lease.

The Company has recorded an expense in the amount of \$1.0 million for the lease termination costs in 2016, for the future period in which the leased property is vacated and no longer being used in operations.

## 12. Contingencies

## The Federal Energy Regulatory Commission Refund Case

In 2000 and 2001, the California energy markets, including those managed by the Company, experienced high prices, shortages of energy and reserves, rolling blackouts and liquidity problems for many market participants. Some market participants, including the California Power Exchange (Cal PX), filed for bankruptcy.

Purchasers of energy during this period sought refunds at the Federal Energy Regulatory Commission. In a proceeding that is still ongoing, the Federal Energy Regulatory Commission has issued a series of orders related to mitigating the clearing prices in markets administered by the Company and the Cal PX for the period from October 2, 2000 through June 20, 2001 (the Federal Energy Regulatory Commission Refund Case). Several of the Company's market participants have settled their liability arising from the Federal Energy Regulatory Commission Refund Case and related proceedings. Management believes the ultimate outcome of the Federal Energy Regulatory Commission Refund Case will have no material financial impact on the Company as these refund amounts are funded and will ultimately be resettled among market participants, except for the Generator Noncompliance Fines, as described in Note 5.

## Market Billing Disputes in Good Faith Negotiations

As part of the tariff and applicable contracts, the Company has dispute resolution processes for market participants to register disagreements regarding information reflected in the settlement statements or billing amounts for market activity.

Market disputes are addressed in the normal course of operations, some of which result in adjustments to previously issued settlement statements. When adjustments are made, the adjustment amounts are reallocated to market participants, with no net cost or credit being realized by the Company. With respect to pending market disputes at December 31, 2016, including those that have escalated to good faith negotiations, management believes that any settlements or market awards would be resettled against the market with no liability to the Company.

## Indemnifications

The Company's bylaws require its annual financial statements to include disclosures about certain payments made by the Company related to indemnifications to or on behalf of officers and Board members. There were no such payments in 2016 or 2015.

## **Other Matters**

The Company, during the ordinary course of its operations, has been involved in various lawsuits and claims. In addition, the Company is subject to compliance with mandatory reliability standards promulgated by the North American Electric Reliability Corporation and approved by the Federal Energy Regulatory Commission, which if violated could result in penalties assessed to the Company.

There are no matters currently pending related to alleged violations of these standards and some pending claims against the Company Management is of the opinion that none of these matters will have a material adverse impact on the financial position or results of the operations of the Company.

## 13. Subsequent Events

The Company evaluates events or transactions that occur after December 31, 2016, but before financial statements are issued for potential recognition or disclosure in the financial statements. The Company has evaluated all subsequent events through April 7, 2017, the date the financial statements were issued, and no items were noted that need to be disclosed.