

Memorandum

To: ISO Board of Governors

From: Ryan Seghesio, Chief Financial Officer & Treasurer

Date: March 8, 2017

Re: 2016 Annual Investment Performance Report

This memorandum does not require Board action.

EXECUTIVE SUMMARY

The investment policy of the California Independent System Operator Corporation requires the Chief Financial Officer to submit an annual investment report to the Board of Governors. This report provides the Board with unaudited information about the 2016 investment performance of the various unrestricted and restricted fund balances held by the ISO. In general, the funds we invest are from general business operations, bond offerings, and market funds associated with generation interconnection deposits, collateral and other funds held for market accounts. Because of the nature of the funds, we pursue a conservative investment approach focused on principal preservation and liquidity.

- As of December 31, 2016, all portfolios were in compliance with ISO investment policies.
- During 2016, the ISO achieved a total return of 0.85% on the unrestricted cash and investment balance, which was \$158.0 million at the end of the year (excluding unrestricted Retiree Medical Plan assets). This trailed the results of the custom benchmark we track performance against which returned 1.07%. Total return information on other portfolios will be described in the report.
- Interest rates were volatile throughout the year, seeing steep declines during the first half of the year, followed by steep increases in the second half. At the end of year, rates had an overall increase of approximately 16-17 basis points across the yield curve compared to last year.

The following table shows the level of U.S. Treasury interest rates at the end of the previous two years:

U.S. Treasury Bond	Yield as of 12/31/15	Yield as of 12/31/16
2-year	1.06%	1.20%
3-year	1.31%	1.47%
5-year	1.76%	1.93%
10-year	2.27%	2.45%

A brief summary of key portfolio characteristics follows, and a detailed list of investments is in Attachment 1.

DISCUSSION AND ANALYSIS

Unrestricted portfolio (excluding Retiree Medical Plan assets)

The market value of the ISO's unrestricted portfolio as of December 31, 2016 was \$158.0 million. This portfolio contains the funds received by the ISO for grid management charges and other revenue collections. These funds are used for the general corporate purposes of the ISO including: operations and maintenance expenses, debt service, capital expenditures and various reserves. An additional \$11.6 million of unrestricted funds, not included above, have been earmarked as assets related to the ISO Retiree Medical Plan. These assets are invested under a separate investment policy.

The portfolio's total return for 2016 was 0.85% and, as of December 31, had a duration of 1.5 years. Duration is one measure of risk to a fixed income portfolio and is highly correlated to weighted average days to maturity. Essentially, duration indicates the approximate percentage price movement of the portfolio given a 100 basis point (1%) move in interest rates. The portfolio actually experienced an income return of 1.03%, which was offset by negative price return of (0.18%) due to the rising interest rates.

There were no significant changes to the investment strategy during the year. Purchases were spread from one to five years with approximately equal exposure to U.S. Treasury, government agency, and corporate debt.

Key portfolio stats by quarter are contained in the table below:

UNRESTRICTED FUNDS	Q1-2016	Q2-2016	Q3-2016	Q4-2016
Balance (in millions)	\$139.1	\$141.1	\$154.3	\$158.0
Year to date return	0.84%	1.27%	1.33%	0.85%
Benchmark return	1.00%	1.58%	1.64%	1.07%
Yield to maturity	0.81%	0.76%	0.92%	1.22%
Duration	1.4 years	1.4 years	1.6 years	1.5 years

Retiree Medical Plan funds

The ISO sponsors the California ISO Retiree Medical Plan, a defined benefit plan, to provide post-employment health care benefits to eligible employees who retire from the ISO. Assets associated with the plan are invested under a separate investment policy approved by the Board which aligns the investment strategy of the assets with the long-term nature of the liabilities. The designated assets are held in two accounts: 1) a trust account which was established to hold the assets associated with the liabilities of current retirees and fully eligible employees; and 2) a custody account which holds designated assets from the ISOs unrestricted funds relating to the balance of the liabilities.

As of December 31, 2016, the market value of the trust was \$9.6 million and the custody account was \$11.6 million. The combined portfolios returned 6.3% for the year as positive returns in the equity markets were slightly offset by fixed income investments negatively affected by rising interest rates. The target asset allocation remains tied to the "Moderate Portfolio" strategy in the ISO's 401(k) plan, which is 55% growth, 35% stability, and 10% real return.

RETIREE MEDICAL PLAN FUNDS	Q1-2016	Q2-2016	Q3-2016	Q4-2016
Balance (in millions)	\$20.0	\$20.3	\$21.1	\$21.2
Year to date return	0.64%	1.71%	6.16%	6.29%

Bond proceeds

The ISO manages a pool of bond proceeds related to the 2013 bond issue. These proceeds represent the remaining funds from the 2009 bonds that are being used for capital expenditures. The investment of bond proceeds is primarily restricted to U.S. Treasury and government agency securities and the yield that the ISO can earn is restricted by IRS arbitrage rules.

As of December 31, 2016, the market value of the 2013 bond proceeds was \$3.2 million. The total return on investments was 0.01% and there is no duration risk as all remaining funds are now invested in a government money market fund.

BOND PROCEEDS	Q1-2016	Q2-2016	Q3-2016	Q4-2016
Balance (in millions)	\$6.2	\$5.4	\$4.4	\$3.2
Year to date return	0.00%	0.00%	0.00%	0.01%
Yield to maturity	0.01%	0.01%	0.01%	0.01%
Duration	0.0 years	0.0 years	0.0 years	0.0 years

Generation interconnection project related funds

The ISO maintains a pool of funds related to generation interconnection project deposits. As of December 31, 2016, the market value of these funds was \$76.4 million. These funds are invested in money market funds and FDIC-insured instruments. The total return on these funds was 1.01% and the duration of the portfolio was 1.8 years.

GIP DEPOSITS	Q1-2016	Q2-2016	Q3-2016	Q4-2016
Balance (in millions)	\$58.9	\$93.0	\$81.5	\$76.4
Year to date return	0.26%	0.50%	0.74%	1.01%
Yield to maturity	1.02%	1.00%	0.95%	1.06%
Duration	2.2 years	1.6 years	1.7 years	1.8 years

Market funds

The ISO manages restricted funds for market participants consisting of amounts which are to be remitted back to market participants or others on their behalf. The majority of these funds are the required collateral deposits that the ISO collects as part of its credit policy to reduce the impact of defaults. As of December 31, 2016, the market value of these funds was \$319.2 million. Due to their liquid nature, these funds are invested in money market funds and, therefore, have no duration risk. The year to date return on these funds was 0.29%.

MARKET FUNDS	Q1-2016	Q2-2016	Q3-2016	Q4-2016
Balance (in millions)	\$250.8	\$232.5	\$235.9	\$319.2
Year to date return	0.09%	0.15%	0.22%	0.29%
Yield to maturity	0.34%	0.27%	0.28%	0.40%
Duration	0.0 years	0.0 years	0.0 years	0.0 years