

Memorandum

To: ISO Board of Governors

From: Ryan Seghesio, Chief Financial Officer & Treasurer

Date: March 20, 2019

Re: 2018 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 2018 investment performance of the various unrestricted and restricted fund balances held by the ISO. In general, the funds we invest are from our conventional business operations, generation interconnection deposits, collateral and market related collections. Because of the nature of the funds, we pursue a conservative investment approach focused on principal preservation and liquidity.

- As of December 31, 2018, all portfolios were in compliance with ISO investment policies.
- During 2018, the ISO achieved a total return of 1.73% on the unrestricted cash and investment balance, which was \$202.2 million at the end of the year. This compares favorably to the custom benchmark we track performance against, which returned 1.63%. Total return information on other portfolios will be described in the report.
- Interest rates continued to rise during the year as the Federal Open Market Committee increased interest rates four times. Although, rates retreated a bit in Q4 and the yield curve remained extremely flat.

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 12/31/17	Yield as of 12/31/18
2-year	1.89%	2.48%
3-year	1.98%	2.46%
5-year	2.20%	2.51%
10-year	2.40%	2.69%

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

DISCUSSION AND ANALYSIS

Unrestricted portfolio

The market value of the ISO’s unrestricted portfolio as of December 31, 2018 was \$202.2 million. This amount excludes \$13.0 million of unrestricted funds that have been set aside for liabilities associated with the ISOs Retiree Medical Plan as discussed below. The unrestricted 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.

The portfolio returned 1.73% and had a duration of 1.6 years as of December 31. 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 1.80%, which was offset by negative price return of (0.08%) due to the rising short-term interest rates.

During the year, the ISO allocated approximately \$35 million to targeted fixed income mutual fund strategies to utilize professional management and enhance the yield on the portfolio.

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

UNRESTRICTED FUNDS (excluding Retiree Medical assets)	Q1-2018	Q2-2018	Q3-2018	Q4-2018
Balance (in millions)	\$162.1	\$166.8	\$188.7	\$202.2
Year to date return	-0.06%	0.32%	0.75%	1.73%
Benchmark return	-0.16%	0.15%	0.53%	1.63%
Book yield	1.55%	1.75%	1.96%	2.32%
Duration	1.3 years	1.3 years	1.1 years	1.6 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, 2018, the market value of the trust was \$10.4 million and the custody account was \$13.0 million. The combined portfolios experienced a 5.84% loss for the year as both equity and long-term fixed income markets declined. 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	Q1-2018	Q2-2018	Q3-2018	Q4-2018
Balance (in millions)	\$20.7	\$24.8	\$25.3	\$23.4
Year to date return	-0.30%	-0.19%	1.50%	-5.84%

Generation interconnection project related funds

The ISO maintains a pool of funds related to generation interconnection project deposits. As of December 31, 2018, the market value of these funds was \$67.9 million.

These funds are invested in money market funds and FDIC-insured instruments. The total return on these funds was 1.46% and the duration of the portfolio was 1.4 years.

GIP DEPOSITS	Q1-2018	Q2-2018	Q3-2018	Q4-2018
Balance (in millions)	\$67.4	\$88.9	\$73.6	\$67.9
Year to date return	0.31%	0.64%	1.02%	1.46%
Book yield	1.27%	1.53%	1.74%	1.65%
Duration	1.7 years	1.2 years	1.2 years	1.4 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, 2018, the market value of these funds was \$273.2 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 1.63%.

MARKET FUNDS	Q1-2018	Q2-2018	Q3-2018	Q4-2018
Balance (in millions)	\$268.6	\$277.6	\$224.2	\$258.9
Year to date return	0.30%	0.70%	1.13%	1.63%
Book yield	1.55%	1.78%	1.98%	2.12%
Duration	0.0 years	0.0 years	0.0 years	0.0 years