



CITY OF
**PALO
ALTO**

CITY COUNCIL STAFF REPORT

From: City Manager

Report Type: INFORMATIONAL REPORT

Lead Department: Administrative Services

Meeting Date: January 23, 2023

TITLE

City of Palo Alto's Energy Risk Management Report for the Second Half of Fiscal Year 2022 (July 1, 2021-June 30, 2022)

RECOMMENDATION

This is an informational report and no City Council action is required.

EXECUTIVE SUMMARY

Staff continues to purchase electricity and gas in compliance with the City's Energy Risk Management Policies, Guidelines, and Procedures. This report is based on market prices and load and supply data as of June 30, 2022, the end of the annual report of Fiscal Year (FY) 2022.

The projected cost of the City's fixed-price electricity purchases is \$3.81 million lower than the market value of that electricity as of June 30, 2022 for the 12-month period beginning July 1, 2022. In the annual report of FY 2022 (July 1, 2021 through June 30, 2022) the City's credit exposure to fixed price contracts is minimal. The projected Electric Supply Operations Reserve is above the FY 2022 minimum guideline reserve level and the projected gas reserve is also above the FY 2022 guideline reserve level range.

There were no exceptions to the Energy Risk Management Policies, Guidelines, or Procedures during the annual report of FY 2022.

BACKGROUND

The purpose of this report is to inform the Council about the status of the City's energy portfolio and transactions executed with energy suppliers for FY 2022. The City's Energy Risk Management Policy requires that staff report on a semi-annual basis to Council on: 1) the City's energy portfolio; 2) the City's credit and market risk profile; 3) portfolio performance; and 4) other key market and risk information. This report covers both semi-annual reports for FY 2022.

The City's Energy Risk Management Policy describes the management organization, authority, and processes to monitor, measure, and control market risks. "Market risks" include price and counterparty credit risk. These are risks that the City is exposed to on a regular basis in procuring electric supplies, and to a lesser extent for gas supplies which are purchased at

market rates via a monthly index price. The City's Energy Risk Management staff are located in the Treasury Division of the Administrative Services Department. Their role is to monitor and mitigate these risks.

This annual report of FY 2022 Energy Risk Management report contains information on the following:

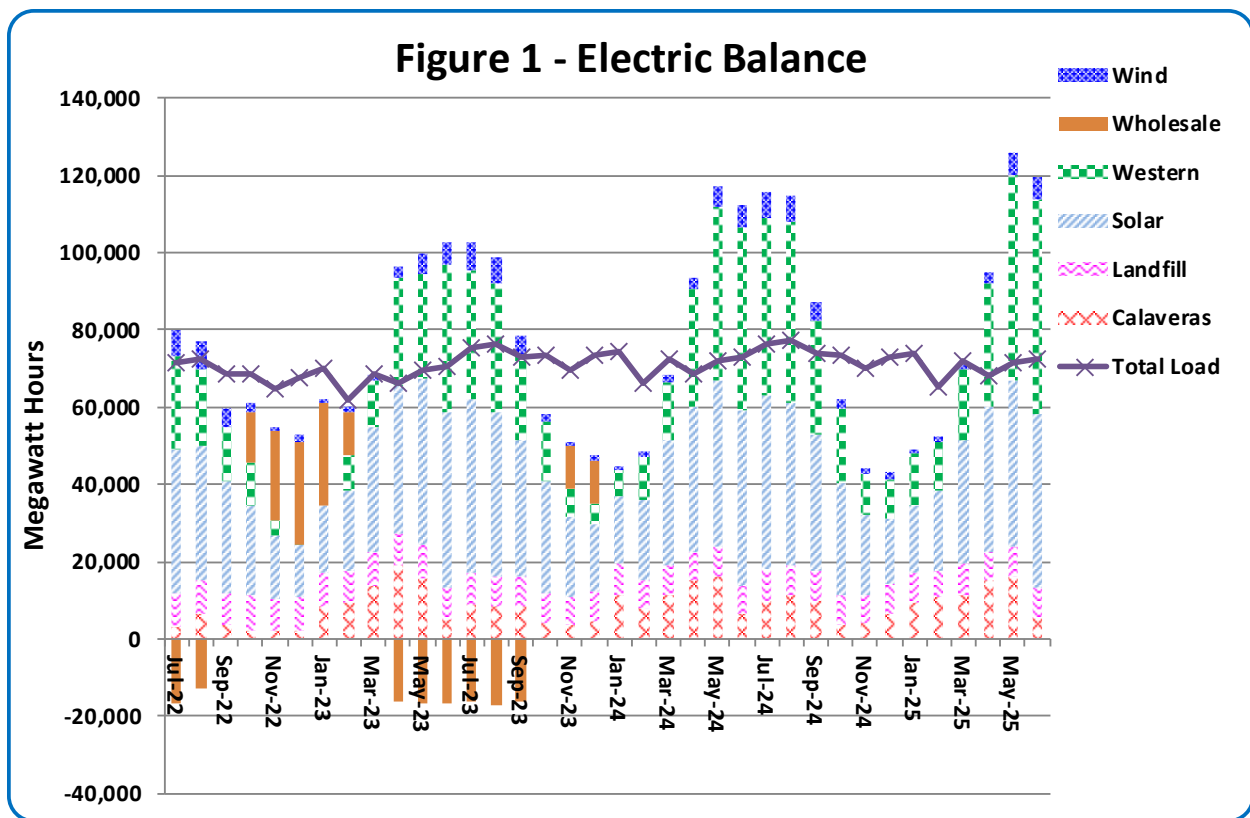
- Electric Supplies
- Hydroelectricity
- Fixed-Price Forward Electricity Purchases
- Gas Supplies
- Credit Risk
- Electric Forward Mark-to-Market Values
- Electric and Gas Supply Operations Reserves Adequacy
- Exceptions to Energy Risk Management Policies, Guidelines, or Procedures

ANALYSIS

Electric Supplies

In order to serve the City's electric supply demands, the City obtains electricity from: hydroelectric resources (from Western and Calaveras Hydroelectric Projects); long-term renewable energy contracts (from landfill gas converted to electricity, wind, and solar projects); wholesale purchases which are carried out via fixed-priced forward market purchase contracts; and the electric spot market.

Figure 1 below illustrates the projected sources and expected purchases of electricity supplies by month for the 36 months from July 1, 2022 to June 30, 2025, in megawatt-hours (MWh). The negative bars represent sales of excess power on the wholesale market.



Hydroelectricity

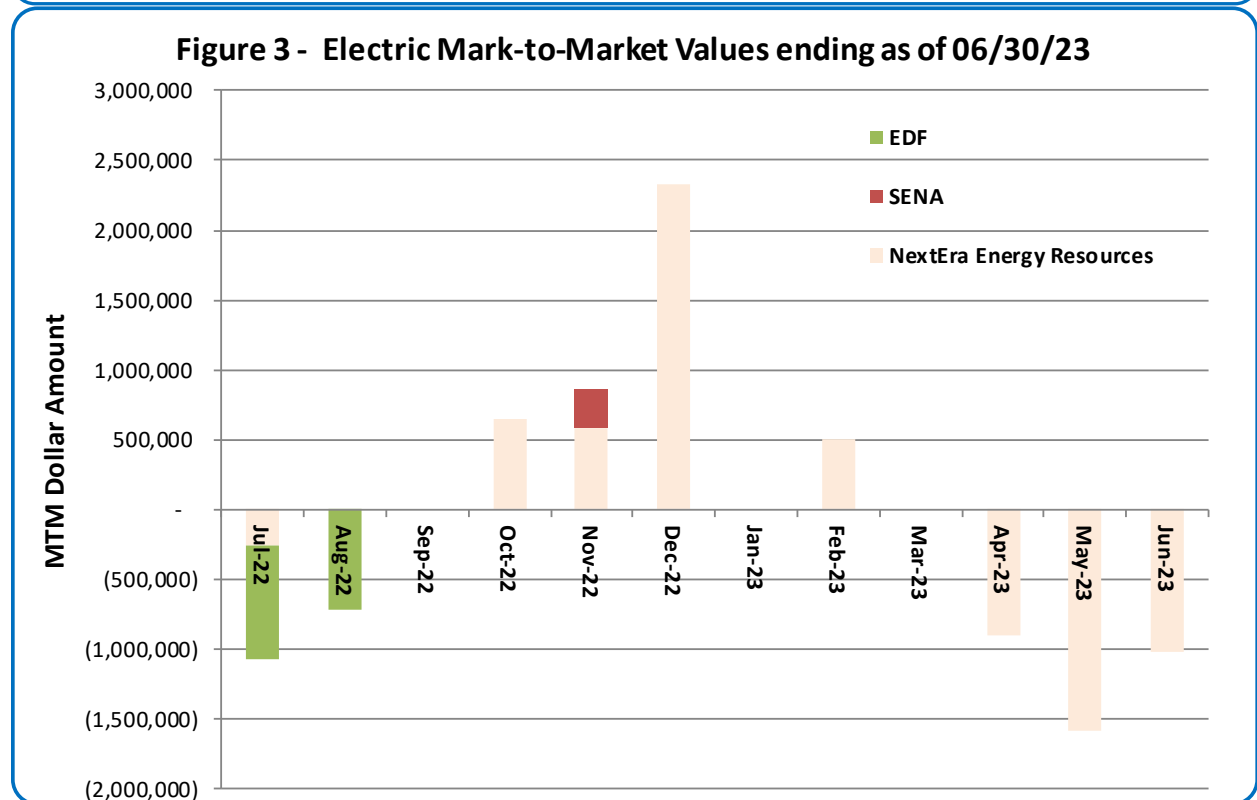
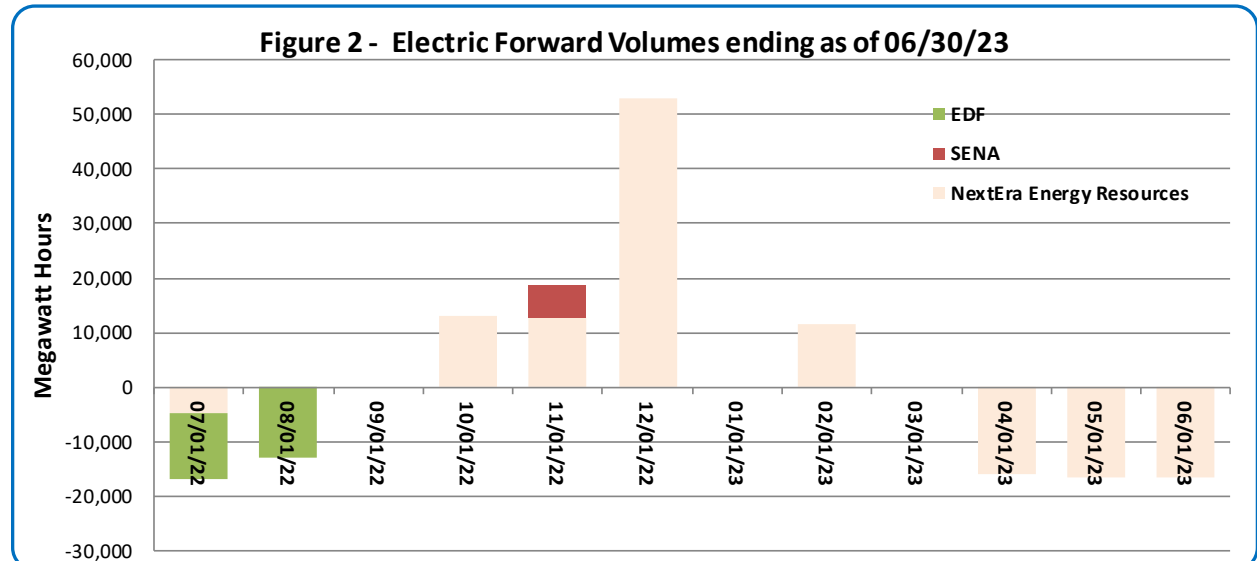
The cost of hydroelectricity received from Western over the 12-month period ending June 30, 2022 is more than the market value of electricity by \$1.0 million. Hydroelectric power from Calaveras was expected to cost \$2.7 million (as of June 30, 2022) more than the market value of electricity. Note that Calaveras provides benefits not reflected in the mark-to-market (MTM, defined in the following section) calculation, including, for example, ancillary services (e.g., the ability to regulate energy output when the electric grid needs change), and that much of the above-market costs are related to debt service on the cost of constructing the dam. This debt is due to be retired in 2032, and retirement will substantially improve the value of the project relative to the market price of electricity.

Fixed-Price Forward Electricity Purchases

The City, as of June 30, 2022, has purchased and sold fixed-priced supplies of electricity for the next 12 months totaling 31,200 MWh with an average price of \$43.72 per MWh and totaling 54,080 with an average price of \$39.23, respectively. The City contracted for these purchases with three of its approved counterparties: SENA (Shell Energy North America), Électricité de France (EDF), and NextEra Energy Resources. The 12-month MTM value of the City's forward transactions for wholesale power was \$3.81 million at the end of the annual report of FY 2022. A positive MTM means that the sales price for these transactions was lower than the market value as of June 30, 2022. The City tracks the mark to market value of its forward contracts to measure the value that would be lost due to a counterparty failing to deliver on its contractual commitments, forcing the City to purchase replacement electricity in the market. The exposure

listed above is well within risk management guidelines and presents little risk to the City's financial outlook.

The figures below represent the electric forward volumes (Figure 2) and MTM positions (Figure 3) for each electric supplier by month of delivery for all forward fixed-price electricity contracts over the 12-month period ending June 30, 2023.



Gas Supplies

In order to serve the City's natural gas needs, the City purchases gas on the monthly and daily spot markets. The City purchases all of its forecasted gas needs for the month ahead at a price based on the published monthly spot market index price for that month. Within the month, the City's gas operator buys and sells gas to match the City's daily needs if the actual daily usage is different from the forecasted daily usage. Those daily transactions are made at an average price based on the published daily spot market index. These costs are passed through directly to customers using a monthly rate adjustment mechanism, leaving the City with little or no price risk or counterparty risk exposure for the gas utility.

Credit Risk

Staff monitors and reports on counterparty credit risk based on the major credit rating agencies (S&P and Moody's) scores, Ameresco has a 1.79% Expected Default Frequency (EDF) which is higher than the recommended EDF level of 0.08%. Staff is continuing to monitor Ameresco's EDF and will continue to report to City Council in this semi-annual report. Table 1 below shows the EDF values for the City's renewable energy counterparties. Table 2 below shows the EDF values and credit exposure for the City's electric suppliers. There is virtually no credit exposure to the City's gas suppliers since the supplies are purchased on a short-term basis.

Table 1 - Renewable Counterparties Credit Ratings and EDFs as of 06/30/22

Renewable Counterparty	Current Expected Default Frequency	Moody's (EDF) Implied Rating
Ameresco	1.79%	B3
Avangrid (formerly Iberdrola)	0.03%	A2

Source: CreditEdge website

Table 2 - Credit Exposure and Expected Default Frequency of Electric Suppliers as of 06/30/22

Electric Counterparty	Cost of Transaction	Market Value of Transaction	Cost vs. Market (MTM) Value	Current Expected Default Frequency	Moody's (EDF) Implied Rating	Expected Loss (MTM x Expected Default Frequency)
NextEra	\$ 3,671,537	\$ 318,564	\$ (3,352,973)	0.026%	Aa3	(872)
SENA	507,600	273,660	(233,940)	0.524%	Baa1	(1,226)
EDF	(1,312,800)	(1,531,066)	(218,266)	n/a	n/a	-
Totals	\$ 2,866,337	\$ (938,841)	\$ (3,805,178)			\$ (2,098)

Electric Forward Mark-to-Market Values

It is important to note that, for contracts with renewable energy companies, Council waived the investment grade credit rating requirement of Section 2.30.340(d) of the Palo Alto Municipal Code, which applies to energy companies that do business with the City. In addition, the City does not pay for renewable energy until it is received, thereby reducing risk.

An EDF of 0.08% or below indicate supplier's current expected default frequency falls within the investment grade range. An EDF above 0.08% indicates the supplier may have financial issues that require monitoring.

Electric and Gas Supply Operations Reserves Adequacy

As shown in Table 3 below, the Electric Supply Operations reserve's audited balance as of June 30, 2022 is \$30.1 million, which is \$12.1 million above the minimum reserve guideline level. The audited Gas Operations reserve balance is \$12.1 million, which is \$5.6 million above the minimum reserve guideline level.

Table 3 - Electric Supply Operations and Gas Operations Reserve Levels for FY 2022

Fund	Audited Reserve for Operations Balance as of 06/30/2021 (\$ Millions)	Changes to the Reserves for Operations (\$ Millions)	Audited Reserve for Operations Balance as of 06/30/22 (\$ Millions)	FY 2022	
				Minimum Guideline Reserve Level (\$ Millions)	Maximum Guideline Reserve Level (\$ Millions)
Electric	\$29.9	\$0.2	\$30.1	\$18.0	\$36.0
Gas	\$12.0	\$0.1	\$12.1	\$6.5	\$13.0

Exceptions to Energy Risk Management Policies, Guidelines, or Procedures

There were no exceptions to the Energy Risk Management Policies, Guidelines, or Procedures to report during the annual report of FY 2022.

FISCAL/RESOURCE IMPACT

This is an information report so will have no resource impact.

STAKEHOLDER ENGAGEMENT

Staff works internally with the Utilities Department to prepare this report.

ENVIRONMENTAL REVIEW

This informational report does not require Council action and therefore is not a project as defined by the California Environmental Quality Act (CEQA).CEQA Guidelines Section 15378). This report is for informational purposes only with no action required by the Council

ATTACHMENTS

None

APPROVED BY:

Kiely Nose, Administrative Services Director

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