



Agenda Report

20-1428

Agenda Date: 1/28/2020

REPORT TO COUNCIL

SUBJECT

Action on Power Purchase and Sale Agreements between Silicon Valley Power and West Valley-Mission Community College District and SunPower Corporation, Systems [Council Pillar: Deliver and Enhance High Quality Efficient Services and Infrastructure]

BACKGROUND

West Valley-Mission Community College District (Mission College) is an electric retail customer of Silicon Valley Power (SVP), currently with 1.1 megawatts (MW) of solar output generating capacity installed on site. Mission College has submitted an interconnection application to install additional 2.5 MW of solar photovoltaic generation and 2 MW / 4 MWh battery energy storage system on its campus. Due to the size of its solar system exceeding the qualification for Mission College to be served under SVP Rate Schedule NM (Net Energy Metering "NEM" Schedule), and the potential for energy production from the generation facility to exceed the customer demand which would cause flows of power onto SVP's distribution system, it is necessary to define the commercial terms under which SVP will purchase this excess generation production under a wholesale power purchase and sale agreement.

NEM Service is offered to SVP's retail customers under Rate Schedule NM provided that the installed capacity of customer owned onsite renewable generation does not exceed 1000 kilowatts (kW) of generating capacity. With the Mission College's new facility, this 1000 kW limit will be exceeded, and the Mission College's system will not qualify for NEM and therefore will not be entitled to the annual payment for the excess solar output. However, it is still economically and environmentally beneficial in both parties' interests to move forward with the project under terms and conditions mutually agreed to by both parties. It was determined that the compensation for any excess solar production should be tied to the avoided cost of purchasing power at the wholesale market price that SVP would be purchasing to serve its load in the absence of Mission College's solar system and therefore avoid any subsidization of the solar project by other SVP customers. As such, the rate SVP will pay for this excess power will be aligned with the California Independent System Operator (CAISO) day ahead market price and the metered output during intervals of time that exceed the customer's energy consumption. These terms and conditions are intended to reflect wholesale energy prices SVP would expect to pay any other market participant when it is purchasing power to serve load.

In addition to a solar generation project the customer is also installing a Battery Energy Storage System (BESS) that has the capability to store some of the excess solar production and shift that production to other hours of the day. Under SVP's current rate structure, appropriate price signals would not be sent to ensure that the BESS is operated in a manner that would necessarily be beneficial to all SVP customers. While Mission College could simply use the BESS to minimize their own monthly bills, there is the potential to derive more value from the system by allowing it to be operated and managed by SVP at times when wholesale prices are at the highest.

As a pilot program, SVP, Mission College, and SunPower (as the BESS system operator) have drafted a Purchase Power and Sale Agreement (PPSA) that allows for operation of the BESS that brings the most economic value of the system to all customers, and ensures that the system is operated as efficiently as possible to reduce Greenhouse gas (GHG) emissions and maximize value relative to the wholesale market. Under this PPSA with SunPower, SVP will make a fixed payment to SunPower to operate BESS under SVP's instructions, provided that the BESS meets the performance requirements set forth in the PPSA with Sunpower. SunPower will pass through to Mission College a share of these fixed payments to cover the capital expense of the BESS.

DISCUSSION

As California transitions to higher levels of renewable power, the role of distributed energy resources, energy storage, and intermittent renewable resources is going to be very important. Fully understanding the economics and operating characteristics, as well as, the limitations of various technologies are crucial to being able to achieve California's zero carbon goals at a reasonable cost. These PPSAs, in combination, will allow SVP, distributed energy resource developers, and SVP's retail customers to explore potential solutions to providing reliable electric service in the future where customers are both consumers and distributed electricity producers.

The Mission College PPSA provides the terms and conditions that SVP will purchase the excess solar production not consumed by Mission College. This energy is purchased at a price equivalent to what SVP would otherwise pay for this energy from the CAISO. The Mission College PPSA also has terms and conditions that allow a credit or charge on the wholesale bill to account for the potential higher or lower retail bill as a result of the BESS operation. For example, when the BESS is charging while there is little solar production, the BESS is taking power from SVP grid, which combines with customer's retail consumption might set a monthly peak demand on its retail bill. Likewise, when the BESS is discharging, the customer will take less power from SVP grid, which results in lower metered usage, and therefore lower energy charge and demand charge on customer's retail bill. Since SVP is paying for the operation of the BESS through a fixed monthly payment, the operation of the BESS will be netted out of the customer's retail meter as if the BESS was instead not connected to the customer's retail meter. This may result in either charge or credit to the customer's monthly retail bill and such charge or credit will be invoiced through SVP's wholesale energy settlements group, as is done with other wholesale power purchase agreements.

The SunPower PPSA provides the terms and conditions that SVP will pay for the operation of BESS. This will amount to a monthly fixed payment based on SVP's forecasted value of the BESS operated over the 15-year life of the BESS. The PPSA provides specific operational parameters that must be followed with regard to when it is charged and discharged. Failure to follow these parameters may result in liquidated damage provisions of the PPSA that would reduce these monthly fixed payments.

ENVIRONMENTAL REVIEW

This action being considered does not constitute a "project" within the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines section 15378(a) as it has no potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

FISCAL IMPACT

SVP estimates the combination of these PPSAs will have neutral fiscal impact. In the case of the Mission College PPSA, SVP is simply passing on to Mission College the price of power that SVP would otherwise pay the CAISO in the absence of the solar facility. With regard to the SunPower PPSA, SVP has modelled the expected value that will be generated by operating the BESS as defined in the PPSA, and structured the agreement such that these modelled savings are passed through to the BESS operator and customer.

COORDINATION

This report has been coordinated with the Finance Department and City Attorney's Office.

PUBLIC CONTACT

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall Council Chambers. A complete agenda packet is available on the City's website and in the City Clerk's Office at least 72 hours prior to a Regular Meeting and 24 hours prior to a Special Meeting. A hard copy of any agenda report may be requested by contacting the City Clerk's Office at (408) 615-2220, email clerk@santaclaraca.gov <<mailto:clerk@santaclaraca.gov>> or at the public information desk at any City of Santa Clara public library.

RECOMMENDATION

1. Authorize the City Manager to execute a Power Purchase and Sale Agreement with West Valley-Mission Community College District;
2. Authorize the City Manager to execute a Power Purchase and Sale Agreement with SunPower Corporation, Systems; and
3. Authorize the City Manager to make any minor modifications and amendments as required for the life of these Power Purchase and Sale Agreements to maintain the balance of benefits to SVP and the other parties.

Reviewed by: Manuel Pineda, Chief Electric Utility Officer

Approved by: Deanna J. Santana, City Manager

ATTACHMENTS

1. Power Purchase and Sale Agreement with West Valley-Mission Community College District
2. Power Purchase and Sale Agreement with SunPower Corporation, Systems