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11/10/2020	1	City Council and Authorities Concurrent	Approved	

REPORT TO COUNCIL

SUBJECT

Approval of Silicon Valley Power's Energy Storage Procurement Plan to Re-Evaluate Energy Storage as an Element of the Electric Utility Power Supply Plans in Compliance with California Assembly Bill 2514

COUNCIL PILLAR

Deliver and Enhance High Quality Efficient Services and Infrastructure and Sustainability

BACKGROUND

In 2013, Assembly Bill 2514 codified Public Utilities Code Section 2836(B) that requires the governing board of each local publicly owned electric utility (POU) to determine appropriate targets for the utility to procure viable and cost-effective energy storage systems to be achieved by December 31, 2016, and December 31, 2020, on or before October 1, 2014 as part of their supply plan. There are no requirements for POUs to set targets for energy storage. The statute also requires each governing board to re-evaluate the determinations made pursuant to this subdivision not less than once every three years, where the first three-year period ended in 2017, and the second evaluation period will end December 31, 2020. Post-2020, Silicon Valley Power (SVP) will continue to report progress on its energy storage procurement, strategy and deployment in SVP's Integrated Resources Plan which would be reviewed and approved by the City Council and subsequently submitted to the California Energy Commission (CEC) every five years.

DISCUSSION

SVP's Energy Storage Procurement Plan is a re-evaluation of energy storage targets and goals for SVP, and provides a summary of the comprehensive research and analysis of energy storage technologies, economic modeling, industry and technology research, and collaboration with other joint power agencies, municipal utilities, and Community-Choice Aggregators (CCAs) that SVP has

carried out to support its findings. SVP conducted and continues to research and review emerging technologies across electrochemical (battery), thermal, mechanical, and hydrogen storage technologies.

At this time, SVP finds that lithium-ion batteries, both lithium nickel manganese cobalt oxide (NMC) and lithium-iron phosphate (LFP) chemistries, to be the most common and frequent storage medium across the stationary storage landscape due to the scaling from electric vehicles and growing utility-scale storage installations. However, SVP also finds that the total installed costs for battery storage remains high with an average levelized cost of energy (LCOE) of $500-$600/kWh and a payback period of 15 years for systems less than 10 MW in capacity, and is not cost-effective relative to current market prices. SVP currently has more cost-effective means of achieving most of the performance characteristics provided by energy storage systems. SVP will not set energy storage goals and targets at this time, however the pilot programs described in this Plan will assist SVP in determining the most cost-effective means of developing energy storage and determining energy storage procurement targets for the future.

SVP will continue to test the technological and economic feasibility of energy storage through four R&D projects, and will evaluate a utility-scale battery storage system as part of a portfolio of transmission solutions to support future load growth. SVP seeks to explore energy storage projects and programs that will provide value to the ratepayer, benefit the low-income and medical vulnerable communities, increase the reliability of its grid, increase grid integration of renewable energy, and reduce greenhouse gas (GHG) emissions and criteria pollutants to improve local air quality in the City of Santa Clara.

ENVIRONMENTAL REVIEW

The action being considered does not constitute a “project” within the meaning of the California Environmental Quality Act (“CEQA”) pursuant to CEQA Guidelines section 15378(b)(5) in that it is a governmental organizational or administrative activity that will not result in direct or indirect changes in the environment.

FISCAL IMPACT

Adoption of the Energy Storage Plan would have no economic or fiscal impact on the City. However, if SVP moves forward with any of the described research and development projects, programs, and projects to ensure reliability to meet future load growth, and to de-carbonize the grid, SVP would incur costs. SVP would subsequently present specific project and program information and contract requirements and impacts to the City Council for consideration at future meetings.

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>.

RECOMMENDATION

Approve and adopt Silicon Valley Power’s Energy Storage Procurement Plan to re-evaluate energy

storage as an Element of Electric Utility Power Supply Plans in Compliance with California Assembly Bill 2514.

Reviewed by: Manuel Pineda, Chief Electric Utility Officer
Approved by: Deanna J. Santana, City Manager

ATTACHMENTS
1. Energy Storage Procurement Plan