



City of Santa Clara

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Agenda Report

21-1306

Agenda Date: 1/12/2021

REPORT TO COUNCIL

SUBJECT

Action on Amendment No. 1 to the Grant Agreement with Bay Area Air Quality Management District
Grant No. 2018.245

COUNCIL PILLAR

Promote Sustainability and Environmental Protection

BACKGROUND

On January 15, 2019, City Council approved the Bay Area Air Quality Management District (BAAQMD) 2018 Grant Agreement No. 2018.245, accepting a grant award of \$300,000. Silicon Valley Power (SVP) applied for grant funding under the BAAQMD 2018 Climate Protection Program on May 11, 2018. The grant was open only to public agencies within BAAQMD's jurisdiction and is aimed to foster innovative strategies that reduce greenhouse gas (GHG) emissions over the long-term. The Grant Program funds activities in two categories: 1) Reducing GHGs from Existing Buildings and 2) Fostering Innovative Strategies with Long-Term Impacts in Reducing GHG Emissions. The Bay Area Air Quality Management District's (BAAQMD) Climate Protection Grant Program prioritizes projects that make progress towards achieving BAAQMD's 2030 and 2050 greenhouse gas (GHG) reduction targets. The Grant Program seeks to accelerate the implementation of the BAAQMD's Clean Air Plan and local climate protection efforts and is consistent with the GHG reduction targets adopted by the City of Santa Clara's Climate Action Plan and with the State of California's GHG and renewable energy goals. The BAAQMD Clean Air Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

DISCUSSION

On June 18, 2018, the City was officially awarded a grant for \$300,000 with a two-year timeline to implement a behind-the-meter lithium-ion battery storage pilot project. The recommended amendment to the contract extends the term of the agreement to April 30, 2022 to address unforeseen delays caused by the COVID-19 pandemic.

The proposed Lithium-Ion Battery Energy Storage System Demonstration Project (BESS Project) will demonstrate the use-case for lithium-ion batteries as longer-duration uninterruptible power supply for data centers that are instantaneous and reliable, delaying the use of diesel generators as backup power. The BESS Project will demonstrate the economic viability and flexibility of a 1 MW/4 MWh battery energy storage system that can be simultaneously dispatched at 2 MW capacity to support critical loads during a power quality event or outage. Such a system stores energy through the use of a battery technology and has the capability to increase the reliability and dispatchability of energy supply at a later time, and is inclusive primarily of a battery, inverter, enclosure/rack, controller, housing, and battery management system.

The BESS combines multiple use storage applications to reduce the operational time and need of diesel generation, optimize GHG reductions through the increased use of renewable energy on the grid to charge the battery, and to reduce the need for natural gas generation dispatch during the evening peak demand hours, through the cycling of a fully dispatchable battery. The project aims to foster innovation, while reducing GHGs in vulnerable communities, and will develop a pilot program to be used for new data center builds in the Bay Area, focusing on the City of Santa Clara as a leader in innovative sustainable solutions.

The Grant funding will be used towards the total installed costs (including capital costs) of the BESS with a total estimated cost of approximately \$2 million. SVP anticipates procuring the BESS in 2021. The future procurement costs include the capital expenditure for the BESS as well as associated construction and installation costs, which will be funded by SVP. The total authorization amount is to be determined, and over the 15-year lifetime of the BESS, it is anticipated that the total installed costs will be recovered through the BAAQMD grant and multiple value streams from the project including: avoided transmission costs, generation capacity (the BESS Project contributes to system resource adequacy by discharging during peak demand hours and scarcity events), and revenue generated from energy price arbitrage (the battery can be charged during low -or negative- priced hours and discharged during higher priced hours to avoid dispatching generators with high fuel and variable operating and maintenance costs).

To fulfill the grant requirements, SVP evaluated partnerships with a battery equipment manufacturer and a data center to pilot a demonstration project. Data center partners were evaluated based on their aligned goals with the City of Santa Clara's Climate Action Plan and BAAQMD's renewable energy and climate goals, a high potential for GHG emissions reduction, cost-effective, and the ability and interest to potentially scale-up the project in future years. SVP has partnered with Santa Clara University as a data center partner.

SVP will return to Council in the coming months to request authorization to finance the BESS equipment and enter into associated agreements with project partners.

SVP anticipated installing the BESS during calendar year 2020. Due to unforeseen project delays primarily associated with COVID-19 and its impact on project partners, SVP anticipates installation of this system in 2021.

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)(4) in that it is a fiscal activity that does not involve commitment to a specific project which may result in potential significant impact on the environment.

FISCAL IMPACT

Grant funding will be transferred from BAAQMD to the City based on 7 milestones and final completion in the amount of \$37,500 each as specified in Amendment No. 1. The total grant reimbursement of \$300,000 will be deposited in the Electric Utility Capital Fund for the Clean Energy and Carbon Reduction project (project #2398) that is budgeted in FY 2020/21. These funds will partially support the cost of the demonstration project. If additional budget actions are needed, staff will bring forward any required actions when associated agreements are submitted for approval.

If needed, budget actions in subsequent years will be included as part of future budgets.

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

Authorize the City Manager to execute Amendment No. 1 to the Grant Agreement with Bay Area Air Quality Management District (BAAQMD) Grant No. 2018.245 to extend the term of the grant to demonstrate the feasibility of battery energy storage systems for back-up power at data centers.

Reviewed by: Manuel Pineda, Chief Electric Utility Officer

Approved by: Deanna J. Santana, City Manager

ATTACHMENTS

1. Original Grant Agreement Grant No. 2018.245
2. Proposed Amendment No. 1 to Grant Agreement Grant No. 2018.245