BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company (U 39 M) for Approval of SB 350 Transportation Electrification Proposals.

And Related Matters.

REPLY BRIEF OF THE
SANTA CLARA VALLEY TRANSPORTATION AUTHORITY ON THE
STANDARD REVIEW TRANSPORTATION ELECTRIFICATION
PROPOSALS FROM
PACIFIC GAS AND ELECTRIC COMPANY

Christina Jaworski
Senior Transportation Planner
Santa Clara Valley Transportation Authority
3331 North First Street, San Jose, CA 95134
Tel: (408) 321-5751
E-mail: Christina.Jaworski@vta.org

December 21, 2017
REPLY BRIEF OF SANTA CLARA VALLEY TRANSPORTATION AUTHORITY ON THE STANDARD REVIEW TRANSPORTATION ELECTRIFICATION PROPOSALS FROM PACIFIC GAS AND ELECTRIC COMPANY


I. Introduction

The Santa Clara Valley Transportation Authority (VTA) operates bus and light rail service within Santa Clara County, and participates in numerous regional transit services that provide connections to and from Santa Clara County. In 2016, VTA had a fleet of 499 buses that consisted of 60% diesel, 40% diesel-electric hybrid\(^1\), along with a fleet of 99 electric light rail vehicles\(^2\). VTA has a Sustainable Fleet Policy that has a goal of

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\(^1\) VTA, 2016 Sustainable Fleet Inventory  
\(^2\) VTA, Current Light Rail System Data, July 2017
In July 2016, the Federal Transit Administration (FTA) awarded a grant for $2,458,305 to VTA to help fund the purchase of its first five battery electric buses and bus charging stations. In May 2017, the VTA Board of Directors authorized the expenditure of $5,222,318 for the purchase of five additional electric transit buses and associated charging systems. At its November 2017 meeting, VTA’s Administration & Finance Committee recommended that the Board of Directors authorize the execution of a contract with Proterra, Inc, in the amount of $4,679,730 for the five additional electric transit buses and associated charging systems. At least five of the ten buses are anticipated to begin operation in 2018. VTA has the option to purchase 25 additional battery electric buses in the amount of $23,398,653.

In addition, VTA has been operating electric light rail service since 1988.

Since VTA is located within PG&E territory, VTA’s comments are directed primarily at PG&E’s Medium and Heavy Duty Vehicle Charging Programs.

II. PG&E MEDIUM AND HEAVY DUTY VEHICLE CHARGING PROGRAMS

A. Introduction and SB 350 Transportation Electrification Policy, Goals and Benefits

As a public transit agency that operates a fleet of 499 buses, VTA realizes the potential of transportation electrification to reduce greenhouse gases and improve air quality, especially in the disadvantaged communities that VTA predominantly serves in Santa Clara County. VTA estimates that electrification of its fleet will reduce greenhouse gases by 37,297 MT per year. VTA is also hoping that fleet

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3 VTA, Sustainable Fleet Policy, Approved September 21, 2016
electrification can benefit the grid as VTA develops a vehicle-to-grid integration system that manages demand and energy charges through a California Energy Commission grant and in partnership with Prospect Silicon Valley, Proterra, National Renewable Energy Lab (NREL), Kisensum, Cisco Systems, Energy Solutions, Clever Devices, CALSTART, NOVA Workforce Investment Board and Pacific Gas & Electric (PG&E).

With the arrival of VTA’s first five battery electric buses, VTA will gain valuable experience with the operation of battery electric buses on our transit network. VTA is particularly interested in learning more about battery range, charging, and operating costs of electricity as we consider expanding our battery electric bus fleet from five to ten to potentially thirty-five battery electric buses.

1. **Cost & Complexity of Upgrading Electrical Infrastructure is a Major Barrier to Transportation Electrification**

   This proceeding will have a profound effect on VTA’s ability to accelerate the electrification of our diesel bus fleet. First, this proceeding could approve the investment of $210.8 million in PG&E territory for much needed medium- and heavy-duty electrical charging infrastructure. As VTA has stated in its testimony and reply testimony, the cost and complexity of upgrading the electrical infrastructure even for five battery electric buses can be prohibitive. These costs are not usually covered by federal and state grants that VTA and other transit agencies are able to leverage for vehicles and charging stations. Another issue that VTA anticipates is the lack of available space at facilities, especially at the Chaboya Bus Division, and at transit centers, for the required electrical infrastructure. As such, the costs and complexity of upgrading electrical charging infrastructure can be one of several barriers to the rate at which transit agencies are able to electrify their fleets.
2. **Costs of Charging is a Major Barrier to Transportation Electrification**

In addition, this proceeding could have an effect on reducing the costs of charging if it includes a decision that directs PG&E to develop a sustainable rate design for medium- and heavy-duty vehicles within 6 – 12 months of a decision as PG&E has proposed. It is important that the decision in this proceeding be clear on the importance of incentivizing transportation electrification adoption, changing rate structures to address demand charges, and comporting with cost causation principles. While VTA would hope that a rate design for medium- and heavy-duty vehicles could be developed that comports with cost causation principles, VTA is concerned that such a rate might not adequately incentivize transportation electrification or lower the costs of charging compared to diesel fuel at least initially. Through the development of its testimony, VTA has coordinated with San Joaquin Regional Transit District, Solano County Transit, and County Connection, which are all located in PG&E territory and are currently operating battery electric buses or trolleys. Even under the PG&E Transit A-1 Rate Pilot, the average electricity cost for San Joaquin RTD was 18.8% higher than diesel fuel and for County Connection was 65% higher than diesel fuel. In Fiscal Year 2016 (FY16), VTA spent $7.83 million on fuel for its revenue, non-revenue, and paratransit fleet.

3. **Battery Range and Life is a Major Barrier to Transportation Electrification**

By increasing the adoption of battery electric buses, this proceeding can help lead to advances in electric vehicle technology, particularly in battery range and life, that is another major barrier to widespread transportation electrification.

**B. Scope of Projects**

VTA concurs that the size, scope, and duration of the program are reasonable. VTA supports full funding of the program in the amount of $210.8 million and the duration
of five years. In PG&E territory, there are currently thirteen transit agencies with fifty-three battery electric buses on order or with federal funding for battery electric buses secured. Only three of these agencies are currently operating battery electric buses. VTA also supports the duration of five years for the program, especially given the lengthy process for public transit agencies to procure vehicles and the timeline for electrical infrastructure design and construction.

C. Implementation of Projects

1. Program Design

VTA believes that cost-effectiveness is an important criteria for project selection. However, the costs for upgrading electrical infrastructure can vary widely based on site conditions according to VTA’s experience at its Cerone Bus Division. In these cases where costs are higher than the base case, the long term benefits of transportation electrification, including future plans for transportation electrification, should be taken into consideration. In addition, the ability of a project to provide valuable data and experience that could inform future projects, should be taken into account.

2. Disadvantaged Communities

VTA supports PGE’s proposal to reserve 15% of the budget to benefit DAC’s either through the installation of infrastructure within the boundaries of a DAC or the allocation of funds to transit agencies and school bus operators that serve DAC’s.

3. Customer Marketing, Education and Outreach

VTA has no reply on customer marketing, education, and outreach.
4. **Data Collection, Reporting, Performance Metrics, Collaboration and Advisory Council**

VTA acknowledges that more data and experience is needed on infrastructure requirements and costs, electrical usage patterns and load profiles, and electrical costs, in order to inform future programs and rate design for transportation electrification. VTA supports the formation of an advisory council to advise PG&E on program implementation.

5. **Other Project-Specific Details**

VTA has no reply on other project-specific details.

D. **Budgets, Cost Recovery and Ratemaking**

VTA has no reply on budgets, cost recovery, and ratemaking.

E. **Rate Design**

VTA has no reply on rate design.

F. **Competition Issues**

VTA has no reply on competition issues.

G. **Other Issues**

VTA has no reply on other issues.

H. **Conclusion**

VTA recommends that the Commission promptly approve PG&E’s Medium and Heavy Duty Vehicle Charging Programs in the full amount of $210.8 million and for the timeframe of five years. VTA believes this program is desperately needed to meet the State of California’s aggressive goals for reducing greenhouse gases,
decreasing dependence on fossil fuels, and improving air quality by addressing major barriers to transportation electrification.

Dated: December 21, 2017

Respectfully submitted,

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Christina Jaworski
Senior Environmental Planner
Santa Clara Valley Transportation Authority
Tel: (408) 321-5751
E-mail: Christina.Jaworski@vta.org