

**DOCKETED**

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<b>Project Title:</b>	Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure
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*Comment Received From: Christina Jaworski*  
*Submitted On: 11/8/2019*  
*Docket Number: 19-TRAN-02*

**Solicitation Concepts for Medium- and Heavy-Duty Zero Emission Vehicle and Infrastructure Deployment**

*Additional submitted attachment is included below.*



November 7, 2019

California Energy Commission  
Docket Office, MS-4  
Re: Docket No. 19-TRAN-02  
Docket@energy.ca.gov

**Subject: Comment Letter Regarding Solicitation Concepts Related to Zero Emission Transit Buses**

Dear Commissioners,

The Santa Clara Valley Transportation Authority (VTA) thanks the Commission for providing this opportunity to submit feedback about potential solicitation concepts on Medium- and Heavy-Duty Zero Emission Vehicle and Infrastructure Deployment as presented at the staff workshop on October 25, 2019. Under Concept #5: Miscellaneous – Long-Haul and Innovative Applications, VTA proposes a concept for consideration as it relates to Zero Emission Buses (ZEB) and VTA's commitment to fully transition its 470 bus fleet to zero emission ahead of the 2040 Innovative Clean Transit Rule mandate. VTA operates over 80 bus routes and light rail lines, supplying critical transportation to municipalities across Santa Clara County.

VTA is currently undergoing a 3-year vehicle to grid integration project, funded by the California Energy Commission, that is piloting a cloud-based energy management system to charge buses and track energy consumption while reducing the impact on the electrical grid. The project is integrating systems to reduce charging costs through demand management and demand response.

Through the investigations funded by the Commission, VTA believes a sensible next step is to create a local microgrid capable of collecting and storing electricity during the day and discharging into the buses at night. Such a microgrid could include integrated on-site solar resources, battery storage, the electrical grid, backup generators, and the energy management system. There are many potential benefits to this type of system:

- Reduces immediate needs to upgrade electrical grid infrastructure, by incorporating on-site generation resources (solar) that supplement or supplant the electrical grid.
- Applies broadly to transit agencies across California, allowing transit agencies who invest in battery electric buses and who have limited electrical grid supply to meet their phased ZEB procurement targets on time.
- Improves our ability to provide emergency vehicle charging during extensive grid outages thus supporting VTA's mission in supporting emergency services.
- Provides flexibility as it does not preclude any transit agency from simultaneously pursuing electrical grid upgrades to its properties.

- Optimizes acres of bus parking to provide on-site generation capability.
- Allows for the use of hydrogen or other energy technologies as local generation sources, and allows the use of different energy storage technologies and chemistries.
- Provides a resilient and sustainable solution to climate change impacts, such as electrical grid shutoffs, by allowing (some, if not all) buses to perpetually recharge using on-site solar resources and providing critical transportation to communities even through extended emergencies.
- Provides leverage for local transit operators to minimize the cost impact of the change in time-of-use (TOU) periods and the flattening of the TOU differentials that will become mandatory for certain rate schedules with high concentration of solar customers in November 2020.

This type of project would significantly advance our fleet electrification efforts, and could be applied to numerous transit agencies across California, as transit agencies would be able to deploy more electric buses faster than the electrical grid upgrade cycles and funding would otherwise allow.

However, in order to establish an effective local microgrid, we need to understand how to integrate solar resources, microgrid technology, and energy storage specifically into our facilities and operations. The Commission's leadership in developing this concept would be a major benefit to advancing our clean air goals.

In addition, VTA generally supports Concept #2: Transit and Truck Fleets, Capital Expense Assistance for Zero Emission Infrastructure Deployment. Even though PG&E has the EVFleet program which provides funding for electrical infrastructure, the EVFleet program mostly pays for, constructs, owns, and maintains infrastructure *to the meter*. The EVFleet program provides a modest incentive of \$9,000 per vehicle for the infrastructure *behind the meter*. As a result, Concept #2 would provide transit agencies with much needed assistance with the incremental costs of the *behind the meter* infrastructure.

Related to Concept #2, VTA is concerned about the requirement for a Preliminary Capacity Check, which includes a letter from the utility company stating that it can provide enough electrical power at the project location, as an eligibility criteria for funding. Based on VTA's experiences at our Cerone Bus Division in North San Jose, PG&E has informed us that a system upgrade will be needed after we reach a fleet size of 70 electric buses or 30 additional high power chargers. VTA has future plans for as many as 140 electric buses at this site. It is also likely that our other two bus divisions will need system upgrades. As a result, this requirement for a Preliminary Capacity Check will disqualify many transit agencies from receiving funding through this program since most agencies will require them.

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November 7, 2019

If you should have any questions regarding our comments, please contact Mr. Gary Miskell, Chief Information Officer, at (408) 348-4309 or via email at [gary.miskell@vta.org](mailto:gary.miskell@vta.org).

Respectfully,



Nuria I. Fernandez  
General Manager/CEO

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