



December 7, 2017

Subject: Comments on Proposed Fiscal Year 2017-18 Funding Plan for Clean Transportation Incentives

Summary Overview

The extensive funding recommended in this plan along with current incentive programs provide further proof of California Air Resources Board's commitment to achieve California's climate and clean air goals. Thank you for this leadership and for the opportunity to participate in the development process and provide feedback. The Orange EV comments contained herein focus on Chapter 4: Heavy-Duty Vehicle and Off-Road Equipment Incentives.

Background

Orange EV manufactures heavy-duty (Class 8) pure-electric terminal trucks also known as yard trucks, drayage trucks, hostlers, spotters, and more - they can all refer to the same vehicle. Orange EV provides the first - and still only - commercially deployed Class 8, 100%-electric vehicles. The trucks have been commercially deployed since 2015, in both on-road and off-road versions. Orange EV trucks meet the demands of even the harshest environments (e.g. Chicago rail intermodal) and 75% of fleet customers have re-ordered within six months of receiving their first truck.

Most fleet customers have required incentive funding to offset: higher up-front capital costs, the cost of testing and deploying new equipment, the time required to train operators and maintenance teams, and capital limitations available to the business to invest in new equipment. CARB's 2017-2018 funding proposal provides several valuable incentive programs to advance the deployment and adoption of pure-electric yard trucks.

Policy and Statutory Drivers

The State has enacted numerous plans, executive orders, and laws that have established a strong foundation for achieving climate change and air quality goals. Some of these drivers could be counter-productive and should be revised to better achieve desired outcomes. Suggestions are highlighted below in individual program discussions.

Zero- and Near Zero- Emission Freight Facilities Project

The two groups of projects recommended will provide strong incentive to integrate ZEV and NZEV equipment in concentrated freight facilities. The proposal acknowledges the need for significant infrastructure enhancements, efficiency upgrades, grid improvements, workforce training and development, and employee mobility enhancements. Orange EV fully supports these objectives as outlined in the proposal as they address significant changes that need to occur for improved level and rate of adoption of ZEV and NZEV technologies. Regarding other components of the proposal:



Fully automated CHE: The restriction on purchasing fully automated cargo handling equipment could limit innovation and the many benefits of autonomous operation. Existing and emerging technologies will potentially optimize charging infrastructure, equipment routing, and freight movement thereby reducing the number of vehicles needed to perform necessary tasks and the amount of infrastructure enhancements supporting these vehicles. While Orange EV vehicles do not currently use autonomous driving, we believe the enactment of the restrictions in AB 134 will impact the long-term development and ramp-up of freight facilities. We recommend amending the existing statute and excluding this type of language from future legislation.

1:1 matching: Where ZEV and NZEV technologies are concerned, it is too soon for 1:1 matching. The requirement will have a damping effect, slowing or losing desirable projects. Staff has indicated that large, integrated projects are preferred which would require participation by groups of manufacturers, fleet managers, facility owners, fleet operators, and utilities. Potential stakeholders may not participate though, since higher funding levels would be available from individual vehicle programs. This impact could be mitigated if funding from other sources were permitted, but the current proposal does not allow stacking. To incent participation and accelerate the adoption of new technologies, funding amounts should cover the incremental cost of new technologies and address the true total cost to fleets. Funds from other public and/or private sources should be permitted regardless of the matching parameters.

Disadvantaged and Low-income Communities (i.e. DCs and LICs): Requiring 100% of project funding be spent in Disadvantaged Communities is another example of a policy driver that disincentivizes the Freight Facilities Project. While many of the warehouses and freight facilities are located in DC or LIC areas, ports are not generally or fully located in DCs. To exclude most ports from participation in this Project eliminates prime candidates with broader concentration of ZEV and NZEV vehicles and equipment. Instead, reduce the target investment level to 35% for the Freight Facilities Program.

Incentive caps: Since it is difficult to predict what projects or types of projects may come to fruition under this program, imposing incentive caps may be burdensome and limiting. As an alternative, adjust the scoring model to address areas of concern.

Freight facility definition: To cast the widest net and limit excluding potentially valuable projects/facilities, adopt a broad definition of "freight facility" such as: For purposes of this project, a freight facility is defined as a facility that utilizes freight-carrying vehicles to receive, move or ship materials which includes but is not limited to warehouses, distribution centers, ports, freight airports, railyards and other goods movement facilities.



Zero-Emission Off-Road Freight Voucher Incentive Project

This project acknowledges the success of the HVIP program for on-road vehicles and the need to provide comparable funding for off-road vehicles. Orange EV supports the following proposals which include many proven attributes of similar programs:

- Fleets are permitted to grow with purchase of new ZEV or NZEV vehicles
- Projects would be awarded on a first-come, first-served basis
- Funding amounts should be flexible across eligible equipment categories
- Project structure for voucher disbursement should be similar to HVIP voucher transactions
- Voucher amounts would align with the HVIP amounts (as recommended later in the proposal)
- Fleets would be permitted to apply to multiple funding sources (i.e. stack funds)
- Voucher enhancement for Disadvantaged Communities should be included
- Voucher enhancement for Technology Support Costs (infrastructure, training, etc.) should be included
- Voucher enhancement for Bulk Deployments should be developed

To enhance or clarify the current proposal:

1. Leverage the existing certification processes for on-road vehicles: This approach could streamline efforts for manufacturers and staff to identify eligible vehicles.
2. Leverage the existing HVIP administrator: The processes required to utilize a separate project administrator could significantly delay fund disbursement under this Project. Leveraging the existing HVIP administrator may accelerate this process.
3. Include vehicle conversions at like incentive levels: HVIP currently provides incentives for conversions but this proposal is silent on the topic. Including conversions in the Off-Road program would increase projects, especially in markets where Carl Moyer Funding may not be available, and would eliminate older pollution emitting engines.

Clean Truck and Bus Vouchers (HVIP and Low NOx Engine Incentives)

The HVIP and Low NOx Engine Incentives have significantly advanced the deployment of ZEV and NZEV. Staff has recognized the program's strengths and recommended improvements for continued success. Regarding specific proposals:

Increased funding amounts: This proposal recognizes the higher costs associated with Class 7 and Class 8 vehicles and establishes a new funding tier for these vehicles. With the recommended voucher amount increase to \$150,000 for a new Class 7 or 8 vehicle, the HVIP program comes into alignment with similar programs in other states and areas, such as the New York State Electric Vehicle Voucher Incentive Fund (NYSEV-VIF) and the Drive Clean Chicago program. Orange EV strongly supports this increase which will promote adoption; the potential increase is already generating interest.



Voucher enhancements:

- Disadvantaged Community (DC) enhancement: The DC enhancement directly supports legislative and climate goals and should be continued.
- Electric Vehicle Supply Equipment (EVSE) enhancement: The EVSE enhancement acknowledges the need to support infrastructure costs associated with charging technology for battery-electric technology. In our experience, a range of voucher amounts should be considered. Charging solutions providing up to 20 kW per hour charging capacity can be achieved for a one-time cost over a range of \$1,500 to \$7,500 per truck. For charging solutions at a rate greater than 20kW per hour, it is more likely that facility utility upgrades are necessary and one-time costs can be up to \$35,000 to \$45,000 per truck. Providing Staff with the flexibility to address the enhancement amounts through a public work group process will enable a fact-based and equitable approach to the voucher amounts.

Conversions: The proposal does not mention conversions. Under current incentive guidelines the voucher amount for a conversion is less than that for a new truck, but there should be no difference in these amounts. The incremental cost of an electric conversion compared to a diesel conversion is very similar to the incremental cost of a new ZEV truck compared to a new diesel truck. And although HVIP doesn't have a scrap requirement, a conversion provides the added opportunity to scrap an old, polluting engine. While other incentive programs referenced in the proposal, such as Carl Moyer, may provide higher incentives for conversions, those programs are not always available at the time a customer is making the decision to purchase.

Summary

CARB's efforts to incent adoption of ZEV and NZEV through the comprehensive projects outlined in the 2017-2018 Funding Plan are exceptional and much appreciated. Thank you for your consideration and continued partnership in the mission to deploy emission-free technologies.

A handwritten signature in black ink that reads "Michael R. Saxton".

Respectfully,
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