



December 15, 2016

California Environmental Protection Agency
Air Resources Board

Subject: Volkswagen Settlement – California ZEV Investment Commitment

We respectfully request that California’s priority recommendations for the VW ZEV Investment Commitment include funding for charging stations and electrical charging infrastructure for exclusive use by heavy-duty electric vehicles. By “exclusive use” we mean that the charging stations and infrastructure would not be available to the general public.

This action directly supports many of CARB’s key guiding principles as identified in the ZEV Public Input Workshop on December 2, 2016, including:

- Serve disadvantaged communities
- Expand ZEV technology across more transportation sectors
- Build interest in ZEV attributes and expand public awareness efforts
- Make early, visible progress
- Be complementary and additional to current investments

For most industrial worksites, it’s neither safe nor feasible to allow the general public “behind the gate” access to charging stations and infrastructure, but these projects still have significant public benefit, both for workers on-site and the community at large. Using terminal trucks as a case-study example (though similar benefits are realized for other heavy-duty truck applications):

- **Positively impact disadvantaged communities:** Terminal trucks operate predominantly in industrial areas with poorer air quality. Emissions reductions (and associated health benefits) are immediate and dramatic, with an estimated per vehicle annual reduction of 1.7 tons NOx, 1.6 tons CO, 81.5 kg PM, and 166 tons CO₂ when upgrading to an Orange EV all-electric terminal truck compared to a Tier 3 diesel engine operated 6,000 hours at 2.5 gallons/hour.
- **Increase ZEV applications and exposure:** Terminal trucks operate across multiple sectors including railroad inter-modal, LTL freight, manufacturing, retail distribution, waste management, warehouse, and other container and trailer handling operations. Successfully deploying heavy-duty electrics in new sectors expands reach and encourages adoption of alternative fuel technologies.
- **Generate interest and awareness:** It’s a hurdle to get people into EVs. Positive workplace experiences serve to break the ice, increase comfort with new technology, and gain first-hand knowledge of EV capabilities like torque-on-demand and regenerative braking. Glowing testimonials show that drivers and operators love driving Orange EV all-electric trucks that are smoother, cooler, quieter and cleaner than their diesel counterparts. They share these positive experiences with co-workers, family and friends, organically building interest. Environmental justice organizations further spread awareness, committed to highlighting improvements in disadvantaged communities.



- **Speed deployment, increasing early, visible progress:** Heavy use sites typically require fast-charging systems and investment in electrical infrastructure upgrades. All too often, electric capacity in older, less well-served areas can be limited, increasing costs. Add the cost to purchase the vehicles themselves, and few fleets have the capital to meet these steep up-front expenditures. Providing funding for charging and infrastructure removes barriers and speeds adoption and deployment. This deployment has an immediate cascade effect, reducing emissions, improving health benefits, getting more people into EVs, and increasing positive buzz for EV technology.
- **Complement current programs:** Most existing incentives programs in California were designed for on-road vehicles; adding incentives for charging stations and infrastructure for both on-road and off-road vehicles would complement current programs. Since charging/infrastructure has to support the truck-type, it's important to ensure that off-road heavy-duty trucks are specifically eligible for funding. Terminal trucks are one example of off-road heavy-duty vehicles that in spirit seem eligible for funding, but in practice are often precluded. While terminal trucks can be built DOT-compliant and operate on-road/on-highway, the dominant use is off-road and un-plated (non DOT) within the yards of container handling facilities. Key exclusionary issues center on legacy regulations regarding the funding of re-powers, and minimum endurance thresholds measured in total miles vs. hours of operation, where hours of operation are the more relevant measure of endurance for these lower-speed vehicles' 24x7 duty cycle. Closing this charging/infrastructure funding gap for both on-road and off-road vehicles will incentivize fleet owners to deploy more heavy-duty EVs, significantly impacting emissions and public health.

We further request that CARB recommend streamlined, first-come first-served funding mechanisms:

- For charging stations: A point-of-sale discount program similar to Chicago's user-friendly "Drive Clean Truck" program or California's HVIP program.
- For infrastructure: A rolling approval process with pre-approved funding amounts/percentages.

Traditional competitive grant application processes can be labor and resource intensive with uncertain outcomes. In direct contrast, voucher incentive programs (VIPs) simplify administration and eliminate uncertainty by pre-approving eligible solutions and amounts. This enables companies to plan and budget with confidence, removing barriers and speeding deployment. First-come, first-served VIPs will direct and invest ZEV Investment Commitment funds quickly, efficiently and effectively.

Thank you for your consideration. Please contact us if we can be of assistance.

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

Respectfully,
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