

DOCKETED

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Volvo Group North America's Comments

Additional submitted attachment is included below.

2022-03-18

Patty Monahan
Commissioner
California Energy Commission (CEC)
715 P Street
Sacramento, CA 95814

Re: Docket No. 19-TRAN-02 - CEC Medium- and Heavy-Duty ZEV Infrastructure Funding Allocation

Dear Patty,

Volvo Group North America (Volvo Group) would like to thank the California Energy Commission (CEC) for the opportunity to support and provide comments on the proposal for the Medium- and Heavy-Duty (MHD) Zero-Emission Vehicle (ZEV) Infrastructure Funding Allocation. The aggressive funding plan rightly recognizes the critical need for sustained investments (in infrastructure) for scaling the deployment of MHD ZEVs in order to meet state greenhouse gas and criteria pollutant emission reduction goals.

About the Volvo Group

Volvo Group drives prosperity through transport and infrastructure solutions, offering trucks, buses, construction equipment, power solutions for marine and industrial applications, financing and services that increase our customers' uptime and productivity. Founded in 1927, the Volvo Group is committed to shaping the future landscape of sustainable transport and infrastructure solutions. The Volvo Group is headquartered in Gothenburg, Sweden, employs almost 100,000 people and serves customers in more than 190 markets. North America is a major market for the Volvo Group, employs more than 17,000 people, and operates 10 manufacturing and remanufacturing facilities in seven U.S. states, as well as three plants in Canada and one in Mexico.

In California, the Volvo Group and its dealers employ more than 1,000 people with locations in Costa Mesa, Mountain View, Corona, Hayward, Fontana, Stockton, Fresno and La Mirada. Volvo Group is in the process of training and certifying dealers to sell and service its electric products. Currently 3 dealers in California have been certified with more expected to be added soon.

Volvo Group's Electromobility Solutions

The Volvo Group has spent years developing complete solutions for electromobility, and today, in North America, we are selling the Volvo VNR Electric¹ and Mack LR Electric² for regional distribution and refuse applications. Both heavy-duty (Class 8) models are assembled exclusively in the U.S. for this market. While battery-electric vehicles are a suitable solution for city distribution, city buses, regional haulage and similar applications, Hydrogen fuel cells (to power the electric driveline) will be a good option for heavy transport and demanding long-haul applications. With this in mind, the Volvo Group has formed a joint-venture (called cellcentric³) with Daimler Truck AG to drive the development of fuel cell technology for heavy-duty vehicle applications and is planning large scale production of fuel cell electric trucks in the second half of this decade.

Within the Volvo LIGHTS⁴ project in California, we have successfully demonstrated deploying Class 8 electric trucks in real-world applications. To-date (starting from early 2020), 20+ Class 8 electric trucks have aggregated well over several hundred thousand miles in different regional applications. Volvo is the first major truck OEM to sell battery electric Class 8 trucks to customers. Based on this experience, and our ongoing ZEV product development efforts, our biggest concerns about the Class 8 truck market are not related to technology viability, but rather conditions beyond our control that are critical to ensure a favorable market environment.

Overall Comments

- Aligning CEC's proposed funding amounts and concepts with the ongoing and planned MHD ZEV and infrastructure initiatives (e.g., California Air Resource Board (CARB) and CEC projects, private sector-funded deployments, etc.) will maximize these investments, avoid redundant projects, and grow the charging infrastructure network in California to support MHD ZEVs.
- Infrastructure and truck incentives need to be coordinated (and sustained over many years) to mitigate lack of and/or delays in infrastructure deployments and avoid stranded assets.
- Directly linking CEC's proposed funding amounts and concepts with the timelines and requirements of upcoming regulations (e.g., CARB Advanced Clean Trucks (ACT) regulation, etc.) will show coordination by state agencies and provide clarity

¹ <https://www.volvotrucks.us/trucks/vnr-electric/>

² <https://www.macktrucks.com/trucks/lr-series/lr-electric/>

³ <https://www.cellcentric.net/en/about-us/>

⁴ <https://www.lightsproject.com>

to the marketplace. It will also help focus efforts and provide for a smoother transition rather than a scattering of resources supporting disparate efforts.

- Delays in infrastructure projects will undermine the adoption of MHD ZEVs. A formal structure and process needs to be created wherein local agencies and utilities are accountable to ensure timely completion of infrastructure projects. Furthermore, the infrastructure grants must enforce existing laws for streamlining (AB 1236⁵) and expediting (AB 970⁶) permitting, and other guidelines⁷ as developed by the Governor's Office of Business and Economic Development (GO-Biz).
- The lessons learned from successful joint solicitations by CARB-CEC could and should be applied to these potential concepts broadly. Successful projects should:
 - Include an OEM partner that can prove on time delivery of products to ensure real-world applicability.
 - Include a willing Government partner.
 - Include community-based organizations as partners to ensure local understanding and support.
 - Include workforce development component or at least link to other workforce development projects and initiatives.
 - Include an ecosystem that incorporates technology partners capable of bringing innovation into the mix.
 - Support technology integration (pre-commercialization) activities for advanced technologies and niche applications.
- Infrastructure grants should also include utility upgrades, operation and maintenance subsidies for the early years of operation, and renewable energy generation and storage technologies.
- Increasing fleet confidence in MHD ZEVs depends on reliable charging stations. Uptime standards and reporting should be included in grants with metrics spelling out a high level of availability for the charging equipment. Additionally, the grants should allow adopting tools to increase charging station uptime.
- Funding and prioritizing projects that integrate private funding sources and innovative usage-based business models will help further foster deployment of MHD ZEVs.
- While the proposed program concepts are interesting and generally needed to fill in gaps in infrastructure, below are some specific additional concepts to accelerate the transition to MHD ZEVs.

⁵ https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1236

⁶ https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB970

⁷ <https://business.ca.gov/industries/zero-emission-vehicles/plug-in-readiness/>

- A specific program targeting the refuse industry could take advantage of several currently available ZE refuse trucks. Such a program could be targeted to AB 617⁸ or disadvantaged communities⁹ to ensure equity in air quality improvements.
- Recognizing the unique charging aspects of on-road MHD ZEVs and the prospects of ZEVs in the off-road sector, funding proposals that include mobile charging technology will foster this marketplace.
- Providing storage potentially reduces peak demand on the grid while using second-life batteries reinforces a commitment to reduce the life-cycle impact of these components. Therefore, additional credit should be given to projects that include energy storage capability, particularly using second-life batteries.
- Projects focusing on fueling for MHD fuel cell electric vehicles (FCEVs) that are aligned with a business case and interest from fleets should be prioritized. However, lessons learned from light-duty vehicle deployments should be applied when building out new Hydrogen fueling stations to create the statewide network needed to support MHD FCEVs. Additionally, this should tie into the national network and/or other Hydrogen hubs outside California.

The Volvo Group appreciates CEC's efforts on this front, and we stand ready to work with GO-Biz, CARB, other state agencies, and the rest of the industry to transition to ZE freight solutions in the Golden State.

Thank you for taking the time to read and consider them.

Kind regards,



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⁸ <https://ww2.arb.ca.gov/capp>

⁹ <https://www.arcgis.com/apps/View/index.html?appid=c3e4e4e1d115468390cf61d9db83efc4>