

**DOCKETED**

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<b>Project Title:</b>	Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure
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**Tesla Comments 19-TRAN-02 Zero-Emission Drayage Truck and Infrastructure Pilot Project**

*Additional submitted attachment is included below.*



July 14, 2020

California Energy Commission  
Re: Docket No: 19-TRAN-02  
1516 Ninth Street  
Sacramento, CA 95814

California Air Resources Board  
Clean Transportation Incentives Program  
1001 I Street  
Sacramento, CA 95814

**RE: Zero-Emission Drayage Truck and Infrastructure Pilot Project**

Dear Energy Commission and Air Resources Board Staff:

Tesla appreciates the opportunity to provide feedback on the jointly developed California Energy Commission (CEC) and California Air Resources Board (CARB) Zero-Emission Drayage Truck and Infrastructure Pilot Project and regarding connector standard requirements for medium- and heavy-duty (MD/HD) electric vehicle (EV) infrastructure.

In concept, Tesla strongly supports the anticipated solicitation for the Zero-Emission Drayage Truck and Infrastructure Pilot Project, which aims to pair vehicle and charging infrastructure incentives for fleets of class 8 trucks and regional haul vehicles. Given the nascency of the industry, thoughtful design of incentive amounts and solicitation scoring is needed to ensure the most effective use of program funds. At present, many MD/HD EVs are manufactured in low volumes with limited publicly available pricing transparency. As higher volumes of trucks are manufactured, pricing will become more transparent. In order to prevent tailored vehicle pricing in the near term that may align with incentive amounts, CARB and the CEC should provide scoring preference to projects with lower overall per vehicle cost. This consideration combined with the 50% cost coverage per vehicle limited as currently proposed by CARB will maximize the effectiveness of the pilot program's funds and help advance the industry by supporting competitive technologies.

Relatedly, MD/HD EVs have unique charging needs both in terms of charging power level required and necessary timing for charging compared to the light-duty sector. To make a business and operational case for fleet operators for many MD/HD EVs, high-power chargers, beyond the power levels available currently, especially over 1 MW, will be necessary. The operational use case of MD/HD vehicles is influenced by several factors including driver hours and delivery windows, which in turn, can lead to narrow timeframes of 30 to 90 minutes for charging vehicles and thereby requiring high-power, uniquely designed chargers. As such, a standard connector for the power levels needed for several MD/HD EV applications does not exist today. At early stages of market development, some providers



may offer non-standard systems out of necessity because the available or “standard” chargers do not provide the technical capabilities, such as power level, that newer, non-standard chargers can provide.

At the same time, it is also important to continue to recognize the significant research and development work of more than a half-dozen manufacturers to bring MD/HD EVs to the market over the next several years. As these vehicles become available, there will be a period of continued product improvement and innovation, which includes some level of experimentation on the development and design of charging infrastructure based on market feedback and requirements. Manufacturers and stakeholders are actively working toward developing a standard for high power MD/HD charging, however, in the interim, any standard connector requirement for MD/HD EVs and EV infrastructure would restrict current technological progress and slow California’s ability to meet its climate and air quality goals. It is essential that the CEC maintain a technology agnostic approach to MD/HD connectors until the industry and stakeholders settle on an appropriate and effective standard connector for all MD/HD needs.

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Tesla appreciates the opportunity to comment on the Zero-Emission Drayage Truck and Infrastructure Pilot Project and connector standards for MD/HD EV charging infrastructure.

Sincerely,

Francesca Wahl  
Charging Policy Manager, Business Development and Public Policy