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Tesla Comments - Clean Transportation Programs Revised Investment Plan Update

Additional submitted attachment is included below.



August 19, 2019

California Energy Commission
Re: Docket No: 18-ALT-01
1516 Ninth Street
Sacramento, CA 95814

RE: Revised 2019-2020 Investment Plan Update for the Clean Transportation Program

Dear Commissioner Monahan:

Tesla appreciates the opportunity to provide feedback on the Revised Lead Commissioner Report for the fiscal year (FY) 2019-2020 Investment Plan Update for the Clean Transportation Program.

In advance of the August 5, 2019 Advisory Committee meeting for the Investment Plan Update, Commissioners Monahan issued a letter seeking feedback on 1) overall approach: focus on zero emission transportation, 2) zero emission vehicle (ZEV) infrastructure priorities, and 3) equity and the advisory committee. Tesla's comments below focus on item 2), ZEV infrastructure priorities. In general, however, Tesla supports the focus on ZEVs and ZEV infrastructure for FY 19-20 and continues to recommend coordination with other states agencies and programs including the Air Resources Board (CARB) and the Public Utilities Commission (CPUC) to identify funding gaps and opportunities for leveraging various programs.

I. Allocating funding for medium and heavy-duty ZEV Infrastructure is needed in the near term to drive adoption and should not be deemed premature.

As discussed in the revised report, "medium- and heavy-duty vehicles represent a significant opportunity to reduce greenhouse gas (GHG) emissions and criteria emissions while focusing on a small number of vehicles."¹ In order to ensure the transition to zero emission vehicles in this sector and meet the state's air quality goals, however, charging infrastructure access will have to grow rapidly. In previous comments of the annual Investment Plan update, Tesla recommended explicit inclusion of heavy-duty (HD) electric vehicle (EV) charging infrastructure under eligible projects for the funding program allocations.² Therefore, Tesla supports an increased focus on medium- and heavy-duty charging infrastructure in FY 19-20 Investment Plan and the allocation of \$30 million for the category dedicated to medium- and heavy-duty zero emission vehicles and infrastructure.

While there are other funding sources available today for medium and heavy-duty infrastructure, including the funding approved by the CPUC for the investor owned utilities' programs, this funding alone will not meet the geographical diversity of the infrastructure needs across the entire state. At the same time and as discussed in the revised plan, heavy-duty EVs will have unique charging needs both in terms of charging power level required and necessary timing for charging compared to other sectors. The plan also notes that "medium and heavy-duty manufacturers have not yet agreed to standardize electric vehicle chargers."³ Manufacturers are working toward developing a standard for heavy-duty charging, however, in the interim, this should not be considered as a reason for not funding medium and heavy-duty ZEV infrastructure that is needed today.

¹ Investment Plan Update, July 26, 2019, p.59.

² Tesla Comments, 2018-2019 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) 2nd Revised Staff Report, March 22, 2018.

³ Investment Plan Update, July 26, 2019, p.63.

Today, a standard connector for the power levels needed for many HD EV applications does not exist. To make a business and operational case for fleet operators for many HD EVs, high-power chargers, beyond the power levels available currently, especially over 1 MW, will be necessary. The operational use case of heavy-duty 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 chargers. 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 new, non-standard chargers can provide.

At the same time, it is also important to continue to recognize the significant development work of more than a half-dozen manufacturers to bring HD electric trucks to the market over the next several years. As these HD EVs become available, there will be a period of continued product improvement and innovation, which includes development and design of charging infrastructure. This will include some level of experimentation to meet various HD charging needs, especially for applications over 1MW, and help the early deployment of various heavy-duty EVs.

Finally, it is relevant to note that the actual connector will likely represent a relatively small portion of the component costs for HD charging infrastructure. The costliest items associated with HD infrastructure deployment will include things such as the utility service that brings power to where it is needed, the AC to DC converters and transformation infrastructure, among other items, and other soft costs related to the right to operate the stations such as permits, zoning, etc.

Therefore, investing in HD charging infrastructure today, whether standard or non-standard, will help move California toward its goal of deploying over 100,000 zero-emission capable freight vehicles by 2030 and will provide GHG and local air pollutant emissions reductions benefits.

II. A significant gap in light duty ZEV infrastructure remains and the CalEVIP funding program continues to remain an important element for meeting the state’s ZEV goals for 2030.

The revised plan allocates \$32.7M for light duty ZEV infrastructure in FY19-20. Throughout the plan there is discussion of the current infrastructure gap, and analysis is included that says “that the currently identified investments still leave a gap of nearly 80,000 Level 2 charging connectors, and 3,600 DC fast charging connectors, by 2025.”⁴ As the plan notes, “it is important to front load funding to ensure the public adoption of EVs is not stymied by the lack of charging infrastructure in the intervening years.”⁵ Tesla supports continuing to focus a portion of the funding allocation on light-duty ZEV infrastructure under the Clean Transportation Program and funding regional deployment efforts under CalEVIP.

At the same time, there should continue to be an opportunity to leverage some of the funding for the implementation of regional EV readiness planning, similar to the two phases of the EV Ready Communities Challenge where cities developed blueprints in phase one and applied for additional funds to implement these blueprints in phase two. While the Commission has provided a significant amount of funding for community EV readiness planning over the last eight years, there continues to be interest by cities to receive additional funding to build off previous efforts and incorporate lessons learned. Cities are centers for innovation and represent a significant opportunity to advance EV deployment, therefore it is important to continue to encourage funding projects at the local and regional level as much as possible. When paired with deployment of actual infrastructure, EV

⁴ Investment Plan Update, July 26, 2019, p.7.

⁵ Investment Plan Update, July 26, 2019, p.59.

readiness and planning should continue to be a viable funding option for projects applying under the ZEV infrastructure allocation.

Tesla appreciates the opportunity to express support for the current focus on ZEVs and ZEV infrastructure in the FY 19-20 Investment Plan for Clean Transportation Programs. Investment in ZEVs and ZEV infrastructure for all vehicle sectors continues to be important to help meet California's climate and air quality goals.

Sincerely,

Francesca Wahl
Senior Policy Advisor, Business Development and Policy