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ABB E-mobility Comments on Light-Duty Electric Vehicle Block Grant Design Changes

Additional submitted attachment is included below.

January 19, 2023

California Energy Commission
Fuels & Transportation Division
715 P Street
Sacramento, CA 95814

Re: 20-TRAN-04 Light-Duty Electric Vehicle Block Grant Design Changes

Dear California Energy Commission staff,

ABB E-mobility is pleased to provide the following submission to the California Energy Commission (CEC) in response to Docket No. 20-TRAN-04 relating to the information shared at the Light-Duty Electric Vehicle Block Grant Design Changes Workshop held on January 9, 2024. ABB E-mobility appreciates and shares the California Energy Commission's commitment to get EV chargers quickly deployed throughout the state and actively partners with our customers in their pursuit of CaleVIP 2.0 funding.

ABB E-mobility has been manufacturing EV chargers for the US market for over a decade and is the leading manufacturer of electric vehicle chargers globally, having sold more than 1 million electric vehicle chargers, including 50,000+ direct current fast chargers (DCFC). ABB E-mobility has been manufacturing EV chargers in the US since 2019 and in early 2023, expanded US manufacturing operations to include its Terra family of DCFC including DCFC ranging from 24kW to 180kW. Production began in Columbia, South Carolina in January of 2023 and we have been delivering US manufactured Terra chargers to customers for nearly a year. Our chargers meet the needs of public charging, transit and school buses, medium- and heavy-duty vehicles, and fleets of all kinds.

While ABB E-mobility's focus is on developing, manufacturing, and delivering innovative and reliable charging technologies to the market, ABB does not own or operate chargers available to the public. ABB E-mobility primarily provides charging owners and operators with the technology needed to deliver seamless and high-quality charging experiences. As part of that commitment, ABB has a robust service and maintenance operation providing 24/7/365 monitoring, troubleshooting, and repair services for ABB chargers in the field.

Figure 1. ABB E-mobility Public Charging Reference

Proposed Potential Changes to CaleVIP 2.0

Potential Eligible Costs – Service Level Agreements

In line with the urgent goal of achieving improved reliability for public charging, ABB E-mobility advises against removing service level agreements (SLAs) as an eligible cost for future rounds of CaleVIP 2.0. To achieve at least 97% uptime per port, a charging operator must implement a well-developed and well-resourced service and maintenance program. While ABB E-mobility understands that the CaleVIP rebates may not be enough to cover the cost of an SLA, making them an ineligible cost gives applicants, especially those with less experience, a false sense that EV chargers are "set it and forget it" equipment that doesn't require a well-developed maintenance and operations plan. Without the basic capabilities listed below, achieving 97% uptime per port is elusive:

- 24/7/365 connectivity and monitoring of the operations of chargers
- 24/7/365 service call center to receive service or repair requests
- Service ticketing, escalation, and tracking process
- Scheduled preventative maintenance
- Detailed documentation and procedures to troubleshoot and repair chargers
- Knowledgeable technicians trained to work on the make and model of charger they operate
- Sufficient number of technicians in the proximate geographic regions of the chargers
- Capability to execute detailed service campaigns hand in hand between owner, operator, and manufacturer
- Sufficient local inventory of spare parts and logistics infrastructure

ABB E-mobility appreciates the CEC proposal allowing OEM warranties to remain an eligible project cost, but warranties do not substitute the need for an SLA. While charger OEMs provide standard warranties for parts and labor for a period of time it does not guarantee rapid response and repair time or replacement of consumable parts.

An SLA between the charger OEM and the charging owner, operator, or OCPP network provider fills a few important gaps:

(1) Warranties cover manufacturing defects, not replacements of consumable parts, like cables and connectors which are subject to significant wear and tear;
(2) SLAs set a process and expedited timeline for fixing warranty parts and non-warranty parts;
(3) SLAs allow OEMs and operators to plan for the resources needed to perform repairs;
(4) SLAs set a framework for repairing issues beyond the warranty period and up to the full useful life of a charger;
(5) SLAs set a schedule for preventative maintenance, ensuring higher uptime.

Given that CaleVIP 2.0 only funds chargers located in disadvantaged or low-income communities, a lack of available funding to support long term preventative and corrective maintenance is especially concerning and could lead to greater inequity regarding access to reliable, high powered DCFC. Rapid deployment of chargers is not beneficial to EV drivers if they are not well maintained.

If the CEC decides to remove SLAs as an eligible cost, applicants should be required to provide proof of a well-developed maintenance plan and SLA which is consistent with the CEC's reliability goals and the basic capabilities listed above.

100% Cost Share

ABB E-mobility believes that applicant cost-share serves an important role in ensuring reliable charging for drivers. Cost-share does this in a few ways. First, it supports responsible charger owners or operators because operators that invest in their chargers upfront are more likely to ensure that those chargers are working and able to provide a return on that investment. Second, it helps grow the e-mobility economy by encouraging EV charging business models that can stand on their own and compete with fossil fuel alternatives. Third, it ensures that the applicant has a long-term sustainable business model for providing reliable charging services and is not reliant on subsidies. ABB E-mobility recommends that the CEC avoid reducing eligible project costs and consider a cost share of no more than 80%.

Required Charger Cost Data

ABB E-mobility recommends that the CEC keep any charger cost data internal and use it only during the application review and rebate payment process. If a publicly available dashboard is created, aggregate cost ranges should not be shared by make and model, but by power level per port:

- 150kW
- 200kW
- 250kW
- 350kW+ Above

This is in line with the current structure of the rebates and would still provide applicants with a sense of charger costs prior to purchasing and negotiating deals.

Longer term, we think that a focus on MSRP or an average sales price is only part of the picture. The true cost of DCFC should not be viewed as the one-time purchase price, but as the total cost to deliver 97% uptime for at least 5 years. Using a total cost of ownership approach is similar to how EV owners and operators value an EV purchase and makes sense for a number of reasons. At its most basic level, the State's interest is in delivering the most charging sessions in a cost-effective way. A low-cost charger is not effective at achieving this goal if it is not reliable and well-maintained. As opposed to the focus on the cost of purchasing and installing a charger, the CEC and CaleVIP 2.0 applicants should seek out total cost of ownership data, specifically determining the cost of operating the charger at a minimum of 97% uptime for at least 5 years.

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Thank you for the opportunity to provide comments on the proposed Light-Duty Electric Vehicle Block Grant Design Changes. ABB E-mobility shares California's commitment to electrifying the transportation sector and creating US jobs and economic growth in the process.

If you have any questions or want to discuss any of these topics further, please do not hesitate to reach out to Alex Ehrett, Public Policy & Market Development Manager, at alex.ehrett@us.abb.com.

Respectfully submitted,

Alex Ehrett
Public Policy & Market Development Manager, West Region
ABB E-Mobility