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ChargerHelp! Comments on Zero Emission Vehicle Infrastructure Barriers and Opportunities

Additional submitted attachment is included below.

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April 1, 2022

California Energy Commission
Fuels and Transportation Division
1516 Ninth Street
Sacramento, CA 95814

Re: Docket # 21-TRAN-03 - ChargerHelp! Comments on the EV Charging Infrastructure Reliability Workshop

We commend the Energy Commission for soliciting the public's guidance on improving EV drivers' charging experience and the reliability of charging stations that have been funded by public dollars and stations that are available for public use. Tax payers and EV drivers should feel confident that the EV charging stations installed in their communities are reliable and could operate properly when needed. We thank you for the continued stakeholder engagement.

ChargerHelp! is a technology company that enables the on-demand diagnostics, maintenance, and repair of Electric Vehicle Supply/Service Equipment (EVSE)/ EV charging stations. We are a minority-owned company that helps solve the industry-wide problem of downed and broken EV charging stations hardware and software. ChargerHelp! oversees 20,000 EV charging stations throughout the US, and have built partnerships with charging companies that operate different technology and equipment models.

Workforce development is a cornerstone at ChargerHelp!. The utilization of trained EVSE Technicians will continue to play a significant role in the ongoing operability of EV charging stations in California. Developing and training EVSE Technicians on safety and fire and electrical hazards through California's OSHA and NFPA programs is of priority to begin the essential work of maintaining charging stations operational and reliability. EVSE Technicians learn a robust ChargerHelp! curriculum on the wide range of complexities of the charging stations software such as Open Charge Point Protocol

(OCPP)[1], Open Charge Point Interface (OCPI)[2], and the International Organization for Standardization (ISO)[3]. We also partner with widely known station manufacturers and software providers, who have taken measurable steps in providing training services/certificates to our technicians on the repair of the proprietary charging stations equipment. ChargerHelp!'s services include: Communications testing, Software and hardware troubleshooting, Software upgrades, Cell signal upgrades, Charging/Station commissioning, Preventative maintenance, Charging station unit/component swap outs, Parts replacement due to wear and tear, vandalism malfunctions, and natural damages, among other services.

In our latest research, we have found that in California upwards of 30% of public charging stations are offline and/or broken at any given time. We agree that the EV charging station must have proactive preventative maintenance plans in order to avoid inoperable and stranded assets. The state must require high performance with the stations that are being installed in our communities. They must be reliable for EV drivers at all times. We recommend the Commission consider the following while developing reliability standards:

Funding
We thank the Commission for considering our previous comments that there should be funding for O&M. We continue to share the same recommendation that funding for O&M should be completely separated from installation. In order to best protect the investment California is making on behalf of taxpayers, the Commission should consider allocating 25% of the total funding for charging infrastructure projects for the operations and maintenance (O&M) of the charging equipment.

Ongoing Maintenance Standard
Equipment warranty is a great feature to have while purchasing charging stations but oftentimes the software company is the first point of contact and therefore is required to solve for the stations inoperability. In order for the software company to claim warranty, they need to prove what caused the failures and that the issue the station was experiencing was in fact a parts issue. This method is not the most efficient way to solve for downed or broken charging stations. Furthermore, to maximize the charging stations operability and longevity, the commission should include a Service Level Agreements (SLA) requirement with public funding so that station owners and operators could adhere to consistent equipment maintenance practices aside from warranty. Equipment manufacturers usually have integration with different owners and operators, and because technology evolves in unprecedented times, the Commission should require that owners and operators work with manufacturers. The following are benefits that could arise from requiring SLA's: Scheduled preventative maintenance, detailed documentation of troubleshooting and repairs, 24/7 services calls and ticketing so issues are addressed in a timely manner, and available trained EVSE Technicians to repair appropriate equipment.

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[1] https://www.openchargealliance.org/protocols/ocpp-201/
[2] https://evroaming.org
[3] https://www.iso.org/sites/outage/

Equipment Uptime/Operability
ChargerHelp! recommends that 97% of a given year should be the minimum requirement for uptime standards. There are many different EV charging station models existing today therefore we recommend that further evaluation must be conducted on whether uptime should be calculated per station or per connector to determine which would be more appropriate and fair to the industry as a whole.

Charging station uptime should be measured at least 5 years as of the date the charging station was installed and available for EV drivers. More time may be needed in order to consider the current lifespan of a charging station. Station uptime reporting should be annually but the commission could benefit from more frequent reporting to get further accuracy, (e.g. semi-annual or quarterly). Networked Level 2 and DC Fast Chargers should follow the same metrics, though the public could benefit from reports per technology type. As part of the Commission's goal to analyze reliability, the data collected should be aggregated and anonymized so that companies are not identifiable in public reports. It is imperative for the accuracy and standardization of operation that all charging companies follow the same formula to calculate operability.

ChargerHelp! Defines uptime as the time the charging station's hardware and software are both operational and the charging station dispenses electricity at the intended power level. Uptime should not include events that are outside of the charging companies control, for example, grid failures, cellular and Wi-fi provider outages, and force majeure. These excluded events should be reported directly to the Commission by the utilities and networks. For customers reliability of a charging station, unforeseen challenges of vandalism and abuse, or even charging lot accessibility should be considered separately.

We ask the Commission to consider the FHWA additional comments for further implementation of reliability standards. ChargerHelp! values the work and dedication the Commission has taken to improving EV drivers reliability to available and operable EV charging stations. Ongoing engagement and collaboration between charging station companies and service providers and the Commission is crucial to best identify and adopt practices that work for Californians. We look forward to the continued partnership to EV charging reliability.

Respectfully,

Samantha Ortega
Manager, Government Relations