DOCKETED	
Docket Number:	22-EVI-04
Project Title:	Electric Vehicle Charging Infrastructure Reliability
TN #:	256400
Document Title:	Carleen Cullen - Cool the Earth comments on proposed EVSE reliability regulations
Description:	N/A
Filer:	System
Organization:	Carleen Cullen
Submitter Role:	Public
Submission Date:	5/15/2024 3:27:25 PM
Docketed Date:	5/15/2024

Comment Received From: Carleen Cullen
Submitted On: 5/15/2024
Docket Number: 22-EVI-04

Cool the Earth comments on proposed EVSE reliability regulations

Additional submitted attachment is included below.

cool the earth

Cool the Earth Comments on CEC Revised Proposed Regulations for Tracking and Improving Reliability of California's EV Chargers
May 15, 2024

Cool the Earth appreciates the opportunity to provide comments on the California Energy Commission's proposed regulations to improve EVSE reliability. We appreciate the efforts of the staff.

Cool the Earth, a nonprofit organization, has worked for over nine years to educate consumers about clean electric driving and currently leads a national non-profit collaborative effort, Ride and Drive Clean. Cool the Earth has extensive driver-focused experience with public charging including DC Fast (DCFC), working with thousands of members of the public as well as with cities, agencies, NGOs, utilities, and CCAs. Unfortunately, our constituents frequently have encountered unresponsive kiosks, broken equipment, payment systems that do not work, and other issues that prevent successful charging.

In 2021, Cool the Earth collaborated with a UC Berkeley Professor Emeritus from the School of Engineering to design and perform a systematic field study of every open-system DCFC plug in the Bay Area. Of the 657 plugs tested 27 percent were not functional.

Carleen Cullen, founder and executive director of Cool the Earth, is an active member of the federal ChargeX consortium to improve the customer experience at EV charging stations.

The presence of non-functional charging stations raises a pressing equity concern, particularly for residents of multifamily housing, many of whom are renters residing in economically disadvantaged communities. These individuals rely heavily on public charging infrastructure, making it imperative that the state takes proactive steps to ensure equitable access and dependable service, aligning with the principles of accessibility and fairness in its pursuit of sustainable transportation solutions.

Overview
We broadly support the proposed CEC regulations and encourage the alignment of the CEC regulations with the NEVI standards wherever possible.

Uptime, Downtime, and Excluded Time
We strongly support the CEC's proposal that recordkeeping and reporting for uptime, downtime, and excluded time be done on a per-port basis. This is in direct alignment with the federal NEVI programs.

We also support that the following are not considered excluded downtime: equipment unavailability due to supply chain delays, labor unavailability, damage, and payment system failures. Precluding these faults from excludable downtime recognizes the importance of the driver experience and was supported by several commenters following the 2022 CEC reliability workshop.

We understand the following was inadvertently included and will be removed from the final regulations: "Charging sessions where the charger is unable to meet the customer's expectation for power delivery due to the fault of the vehicle is also excluded from downtime."

Table 3 Reliability Reporting Requirements: Non-networked Chargers

Recognizing the pivotal role that property owners play in achieving state targets, it is crucial that we carefully balance the public benefit of increased EV charging capabilities with the administrative load placed on these individuals. This balance is particularly vital to ensure that property owners remain motivated to install EV charging systems.

In light of this, we suggest the following adjustments to the proposed regulations to minimize the administrative burden on EVSE site hosts managing non-networked EV chargers:

1. Shift the responsibility for notifying the state of the initial deployment of non-networked charging equipment from the site hosts to the distributors or retailers, where feasible. For Level 1 outlets which are simpler to maintain, we propose they are excluded from reporting requirements as this could discourage their deployment.

2. Simplify the reporting requirements by only asking for an annual affidavit from the site hosts to confirm the continued functionality of the original charging equipment.

The requirement for site hosts to submit detailed reports on uptime, utilization, and other metrics for non-networked chargers is not only burdensome but also potentially discouraging for those considering the installation of EV charging stations. Cool the Earth believes that reducing these demands will significantly aid in fostering a more enthusiastic participation from site hosts without compromising the public benefits.

Table 5: Confidentiality

We support the maximum transparency of all reported data that indicates the reliability of publicly or ratepayer-funded EVSE. EV drivers have a right to know about the reliability of EV charging. Therefore, we recommend that total charge attempts, successful charge attempts, and failed charge attempts should be categorized as “Not Confidential.”

Reliability Standards Regulations

We strongly support the CEC’s proposal to add a new charger uptime requirement and a minimum successful charge attempt rate (SCAR).

We support inclusion of a 97 percent minimum uptime standard which aligns with the requirements of NEVI funded chargers. We also support that the uptime requirement is defined on a per-port and not-site basis.

We also support inclusion of the new minimum successful charge attempt rate (SCAR) metric, and believe this is an important customer-centric metric. We further support that the minimum SCAR is defined on a per-port and not-site basis.

However, we recommend some important changes to the proposal for SCAR.

We believe that using a sustained 5-minute charge as the definition of a successful charge for reporting SCAR is not appropriate. Charge failures that occur after 5 minutes are just as, if not more, problematic to drivers. Drivers often leave their car to charge while shopping, dining and other activities away from their

vehicles. Returning to a car that is partially charged is not in line with consumer expectations. We recommend that the definition of a successful charge align with the Charge X KPI language for Charge End Success: *A successful charging session is a charging session that completes without any errors that cause the EVSE to stop delivering power unexpectedly.*

Also, we believe that the proposed minimum SCAR requirement of 90 percent is too low. The CEC recognizes that the SCAR is an important means of providing a more accurate assessment of the true real-world reliability of an EV charger than is provided by uptime alone. We agree completely and as such recommend a minimum SCAR requirement of 99 percent. We see no reason the SCAR should be lower than the uptime requirement. A driver expects that the charger will work the first time, every time. A high SCAR requirement will help deliver on this expectation.

Additional Considerations

We continue to recommend verification, field testing, and enforcement for non-compliance as critical additional components for achieving reliable EV charging.

Third-party verification of Charging Network Provider or Charging Station Operator-reported uptime should involve the review and verification of the raw data and calculations provided by these parties, including reported uptime, outage time, and excluded time. The verification analysis should be made available to the public.

Field-based testing is essential to complement uptime reporting. Field testing of each EVSE port should be a standardized and validated process, performed by a third party and include testing to confirm charging at the intended rate.

To ensure the effectiveness of the CEC regulations proposed, it is crucial to establish enforceable consequences for non-compliance. As previously recommended, we support a two-pronged approach to address this concern. First, in contracts for grant funding, we recommend dividing the grant payment into multiple installments. The final payment should only be disbursed after all performance, maintenance, and reporting requirements have been consistently met for a minimum period of 12 months following the initial operation date. Additionally, we suggest exploring the option of imposing fines for non-compliance as an additional measure to incentivize adherence to the regulations.

We recommend that the proposed regulations mandate the tracking and reporting of instances where charging sessions are provided free of charge, both due to faults and an initial offer. This data is essential not only for identifying and rectifying faults but also for analyzing the implications of free charging on supply and demand dynamics. Additionally, it is important to have data to consider whether free public charging is displacing at-home charging, as this could significantly influence the planning and right-sizing of the number of public stations required. Collecting this data will provide a foundational understanding that is crucial for optimizing infrastructure development and ensuring that it aligns with actual needs.

Thank you,

Carleen Cullen

Carleen Cullen
Founder and Executive Director
Cool the Earth