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Filer:	Elisia Hoffman
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May 15, 2024

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

RE: Electrify America comments on the CEC's Second Draft Staff Report on Tracking and Improving Reliability of California's Electric Vehicle Chargers (Docket No. 22-EVI-04)

Dear Commissioner Monahan and Staff:

Electrify America appreciates the opportunity to comment on the California Energy Commission's (CEC) Second Draft Staff Report on *Tracking and Improving Reliability of California's Electric Vehicle Chargers* and the related April 30, 2024, CEC Workshop. Electrify America is the nation's largest open network of DC fast chargers (DCFC) for electric vehicles (EVs), with over 3,900 ultra-fast chargers across 898 locations around the country, and over 1,100 chargers across more than 250 locations open to the public in California.

Summary of Comments

Electrify America's comments focus on the following elements of the proposed regulation:

- The CEC should align reliability reporting methods with those of the National Electric Vehicle Infrastructure (NEVI) program to minimize added reporting burden on EVSPs.
- Setting a 90% successful charge attempt rate (SCAR) standard appears to misunderstand some of the issues that drive plug-in success.
- Charger-level utilization and reliability metrics are business sensitive information that should be protected.
- Additional considerations around 97% uptime.
- Mandating sharing of real-time availability, accessibility and pricing data with third-party software developers is premature.
- The current state and economics of the industry should be considered in evaluating the costs and benefits of the proposed compliance measures.

Electrify America's Focus on Reliability

In 2023, Electrify America saw significant growth, with over 10 million charging sessions and roughly 380 gigawatt hours (GWh) dispensed on our network. This represents greater than 100% growth on our network compared to 2022. As part of our drive to build the charging network of the future, Electrify America continues to implement strategies that include deploying next generation

technology at existing and new stations, increasing the number of chargers at existing stations, and building bigger stations to better accommodate growing demand. Our next generation technology, which can reach charging speeds of up to 350 KW, has demonstrated a higher level of reliability compared to legacy chargers, resulting in 80% fewer maintenance dispatches than older hardware. To date, Electrify America has replaced over 680 underperforming chargers with this next generation equipment, and we will continue this campaign in 2024. Additionally, we are investing in people, processes, and systems to provide wrap-around support for our charging network through investments in our Network Operations Center, Customer Contact Center, Center of Excellence test laboratory, internal Field Service Engineer Program, and domestic parts inventory. Electrify America remains focused on the reliability of its charging network in order to provide a superior customer experience.

Comments on the Draft Regulation

As a general comment, Electrify America appreciates the importance of providing a reliable charging experience for EV drivers in order to drive continued adoption of zero-emission vehicles (ZEV), and supported by AB 2061. That said, cumbersome and potentially costly reporting requirements may delay the ability of EVSPs to meet California's ZEV targets.

The CEC's proposed use of OCPP 2.0.1 to transmit reliability data in 15-minute intervals poses several challenges.

Electrify America appreciates where the CEC has sought to align its reliability regulations with NEVI requirements. The CEC also indicates in its *Savings and Cost Analysis* (Chapter 8) that some of the costs associated with complying with its regulations will be lessened by its alignment with NEVI and the fact that EVSPs and vendors participating in NEVI will already be making adjustments and updates to achieve NEVI compliance. As such, Electrify America urges that the reporting requirements for the CEC regulation also algin with NEVI.

For NEVI, EVSPs will have to provide aggregated uptime data and provide information on each outage date and duration. Additionally, NEVI participants will have to provide real-time availability through OCPI 2.2.1, which will allow regulators to access information on which chargers are available or unavailable. The CEC appears to be proposing a third required way to communicate this data to regulators, including the requirement that data be communicated in 15-minute intervals. To limit the cost and reporting burden on EVSPs, Electrify America urges a reliability reporting framework under the CEC's regulations that algins with the NEVI reporting framework.

Building on the point above, the requirement that reliability data be communicated via OCPP 2.0.1 by 2026 gives rise to several concerns. First, it does not align with the NEVI framework. Second, it proposed the use of OCPP to transmit reliability data, when OCPI provides a better link between the charge point operator and networked asset to capture uptime and availability data. Third, and

arguably most importantly, the regulation should not dictate which version of a communications protocol is used to communicate data. It is appropriate that a regulator require that a charger be OCPP 2.0.1 *capable*, for example, and that a charger meet certain requirements in terms of type of data requested, but it should be left to the EVSP to determine which version of a protocol makes the most sense to utilize from a business and technical perspective. In the case of OCPP, it will be a significant undertaking to switch to version 2.0.1. There is no current business need to make the switch, and there is also no need to upgrade to 2.0.1 based on the information requested in the draft regulation (OCPP 1.6 can also provide this data).

A 90% successful charge attempt rate standard misunderstands the drivers of a failed charge attempt.

Electrify America shares the CEC's objective of continuous improvement of the customer experience, and monitoring successful charge attempts can provide useful insights into where points of failure exist and how they can be addressed. However, a 90% successful charge attempt rate (SCAR) standard is somewhat arbitrary, conflates user experience with reliability in a way that does not necessarily impact a driver's ability to charge their vehicle, misunderstands the elements that can lead to an unsuccessful first attempt at a charge, and does not account for instances where a customer may have a single unsuccessful charging experience that may be recorded as several attempts. Similarly, to require a five-minute minimum charging session to occur for a charging attempt to be deemed successful (excluding sessions terminated by the driver or due to emergency) is relatively arbitrary. A 5-minute threshold may or may not accurately reflect customer requirements.

According to the CEC, the 10% allowance for unsuccessful charges is meant to recognize that some causes of failed charging attempts are outside of the EVSP's control (e.g., vehicle faults). But a 10% allowance for failure due to vehicle fault appears to misunderstand what drives plug-in success. The issues that can drive down plug-in success include a customer attempting to charge many, many times in a given instance without success. And vehicles with issues can drive huge amounts of failures, over which the EVSP has no control. Additionally, the customer has little way to understand what is causing the failure, and we do not yet have the ability to take the highly technical data coming from the charger and turn it into information that the customer can act on. Further, in a future with roaming and multiple e-mobility service providers (MSP) interacting with each network, there will be situations where a customer has an MSP issue (e.g., payment method invalid) into which the EVSP have no visibility nor ability to troubleshoot. Indeed this issue is prevalent enough that the California Air Resources Board (CARB) is considering adopting additional interoperability requirements through its Advanced Clean Cars II amendments.[1]

[1] https://ww2.arb.ca.gov/sites/default/files/2023-12/2023_11_15%20ACC%20II%20Amends%20Workshop%20slides_ADAv2.pdf

Confidential data must be protected.

Electrify America supports the CEC's proposal to keep charge attempts data confidential and discourages the disclosure of that information even in aggregated form. The number of charging attempts for a given session can include user error (e.g., by first-time users or recent EV adopters) and vehicle error. The SCAR for a charger may create confusion among customers as to a charger's uptime and does not always paint a clear picture of a charger's performance.

Additionally, charger address, geographic coordinates, charger serial number and charger and port unique identification information should be held confidential by the CEC as the default designation. It is unclear what the purpose is for making this information public, and as more drivers transition to EVs, the argument for EV charging equipment to be designated as critical infrastructure will only grow in weight. Also, DCFC stations are connected to the grid – which *is* critical infrastructure – and to networks over which sensitive data is exchanged between vehicles, the grid and third parties. As such, all efforts should be made to keep confidential any information that could open the sensitive and highly important EV charging ecosystem to bad actors that could compromise California's EV charging network, today and in the future.

Additional Considerations for the 97% Uptime Requirement

Vandalism. Electrify America notes that the narrow 5-day window allowing vandalism or theft to count toward excluded downtime is a departure from the NEVI guidelines, which does not put a timeframe on vandalism as excluded downtime. As such, stations that must report uptime under NEVI awards as well as under this proposed regulation might report different uptimes under each, resulting in confusion. The CEC has followed NEVI with respect to other aspects of this draft regulation and should continue to do so in this respect.

Electrify America stations have been subject to vandalism in different jurisdictions. In one case, repeated acts of vandalism at specific chargers in a limited geographical area has led to significant financial impact in terms of the cost of replacement parts, not including forgone revenue. Local law enforcement has been unable to curb the vandalism or prosecute the perpetrators, despite having evidence from station cameras, which has led Electrify America to reevaluate replacement of parts at stations that have been subject to serial, unabated vandalism. At a minimum, in the CEC's regulation, there should be a relief valve for EVSPs to request a waiver of the 5-day window in extreme cases where the cost of continued repair of repeatedly vandalized charger equipment overshadows the benefit of trying to sustain uptime.

Providing a limited window for counting vandalism toward excluded downtime could also impact investment decisions where crime rate, opportunity for crime (e.g., proximity to a copper recycling operation), and/or law enforcement response could factor into an EVSP's calculus on where to

invest. This would disadvantage some communities over others, in terms of EV charging investments, in a way that is often beyond the community's control.

Disputing inaccurate reporting. The CEC indicates that beginning in 2025, it will publish biennial reports assessing the reliability of state charging infrastructure, where staff will rank the reliability of major EV charging networks by including detailed uptime information in the reports. The CEC has offered a dispute mechanism for EVSPs who wish to dispute reliability metrics, but only after the data has been published. While correction of any found inaccuracies is assured by the CEC, such corrections after the fact could fail to correct any reputational harm done to a charging network by the original, erroneous public reporting. The dispute mechanism should allow for correction of inaccuracies prior to publishing reliability data, in addition to a grace period for dispute resolution after reliability data had been made public. Creating public doubt in a specific charging network and then retracting initial findings does not inspire public confidence in California's charging network, nor in those operating and/or regulating it. It is in the State's and the EVSPs' shared interest to get it right the first time.

Reliability requirements for non-State funded chargers. In "Alternative 2" to the regulatory path proposed by the CEC, the CEC indicates that it considered applying the proposed uptime requirement to all EV chargers in California, regardless of funding source (but decided not to go that route at this time). AB 2061 specifically states that uptime recordkeeping and reporting standards "Only apply to electric vehicle chargers and charging stations that received an incentive from a state agency or through a charge on ratepayers."[2] In addition to countering the statute, the financial implications of such a requirement on all chargers, regardless of funding source, would add additional pressure on an industry already facing significant headwinds in reaching profitability. We all undoubtedly share the goal of a successful and thriving EV charging industry, which is crucial to support EV adoption on the scale mandated by the State. The CEC is tasked with threading this needle at a time when a burgeoning industry is seeing sometimes dramatic shifts by different providers based on incremental upswings and downswings in the market. Uptime reporting should remain applicable to state and ratepayer funded chargers, where reporting requirements are known to the EVSP prior to investment.

Utilization and Inventory Reporting Regulations

Utilization Reporting. The CEC proposes requiring all networked charging providers to report on utilization quarterly. The CEC also notes that it considered alternatives to the current proposed regulation, including "Alternative 1", which contemplates not requesting utilization data. In Electrify America's experience reporting quarterly and annual utilization data, it is a resource-intensive process, from both a cost and people-hours perspective. Those costs are likely to be passed on to consumers across EVSPs.

[2] Public Resources Code Section 25231.5(a)(2)

The CEC indicates that it will hold utilization data specific to a charger confidential; if the CEC moves forward with collecting utilization data, Electrify America would urge the CEC protect the confidentiality of utilization data at not only the charger level, but the station level, and further aggregate and anonymized data at a census tract or regional level when making it public. Granular utilization data does not provide the public with particular insight into charger availability or reliability, but it is business sensitive data that can impact an EVSP's competitive positioning if exposed and, therefore, should be protected against publication that does not advance reliability or customer satisfaction.

Electrify America also takes exception to the CEC's assertion that *"highly used chargers can serve more vehicles than those with lower utilization"* (p. 26). At the end of 2023, 80% of Electrify America's California stations saw utilization over 20%, on a 24-hour basis, and 43% saw utilization of over 40% – meaning all operable chargers at the station were in use nearly 10 hours a day. High utilization contributes to station congestion and queueing, which creates added pressure on the network. Highly used chargers *do* serve more customers than chargers with lower utilization, but if the idea is to direct more drivers to high utilization sites, this would only increase network pressure and threaten to degrade the customer experience.

Sharing real-time availability, accessibility and pricing data with third-party software developers for free through an API is premature.

Allowing customers the ability to see what chargers are available and accessible, with pricing data, is important to the customer experience. Similarly important is an EVSP's ability to manage performance with third parties when sharing data. At a minimum, roaming relationships between charge point providers and MSPs should require negotiated agreements that address a range of potential issues. In the absence of such agreements, EVSPs have no recourse to address poor performance or cybersecurity risks, up to and including termination of a relationship with a third party that is putting data or operations at risk. Additionally, data shared with MSPs can contain customer PII, which would give the MSP insight into data as specific as a customer's driving behavior (where they go, how long they stay) and payment behavior. It is important to get roaming right, and if the state moves forward with a roaming framework that leaves customer data vulnerable, creates responsibility gaps between EVSP and MSP, or otherwise degrades rather than augments the customer experience, the customer response to bad roaming could be worse than having no roaming at all.

Cost of Compliance and Business Impacts

Savings and Cost Analysis. The CEC indicates that for Recordkeeping and Reporting Regulations, Reliability Regulations (uptime and SCAR), and Data Sharing regulations, there will be an increase in costs for EVSPs. However, the CEC indicates that some of those costs will be mitigated by the fact the some EVSPs will be creating systems to provide similar information under NEVI. This

includes a $3.8M to costs for DCFCs to meet the 97% uptime + 90% SCAR requirements in the first year that regulations are fully in effect (2026). It is not clear that the roughly $4 million in projected cost for DCFC compliance in 2026 fully captures all potential costs and Electrify America would note that any added cost to the EVSPs will undoubtedly translate to some additional cost to consumers at a time where electricity rates are already increasing quickly and creating affordability concerns for EV drivers. As such, the impact of cost on consumer behavior should be viewed with similar regard as charger reliability's impact on consumer behavior, particularly in pursuing an equitable ZEV transition.

Similarly, the Jobs portion of the Economic Impacts evaluation suggests that the proposed reliability regulations will positively impact job creation due to an increased need for technicians for charger maintenance. While likely true, and a boon to workers in this segment of the market, this also has cost implications for EVSPs and therefore drivers, which could reduce the number of chargers deployed and associated jobs. The staff report also speculates on the likelihood of costs of compliance impacting Business Creation and Elimination, which may not fully reflect the current reality that relatively established players in the industry are operating on narrow margins and/or making big business decisions based on financial performance. The CEC should continue to ruminate on the state of the industry and the impact of these regulatory requirements.

Requirement that state agencies consider reliability when making EV charging funding decisions. Reliability is an important component of the customer experience, and gathering info on charger reliability can help guide policy makers in finding solutions to address reliability challenges. Chargers that do not meet reliability standards, or network providers who may have marginally lower performance than another, should not be penalized in blanket fashion for underperformance with respect to receiving state funding. There are arguably instances where underperformance may suggest a need for additional funding to bring chargers into compliance. Given the amount of charging required to support the state's zero emission vehicle (ZEV) adoption trajectory, a hardline stance in this regard may hinder rather than advance the state's goals.

Conclusion

Electrify America appreciates the CEC's efforts to support the reliability of California's EV charging infrastructure. A positive customer experience and equitable access to reliable charging is a shared goal, and we look forward to continued collaboration with the CEC on this issue. Please do not hesitate to reach out with any questions.

Sincerely,
/S/
Rhiannon Davis
Director of Government Affairs
Electrify America, LLC