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EVgo Comments on Second Draft Staff Report

Additional submitted attachment is included below.

May 15, 2024

California Energy Commission
715 P Street
Sacramento, CA 95814

Re: Docket No. 22-EVI-04 – Second Draft Staff Report Tracking and Improving Reliability of California's Electric Vehicle Chargers

I. Introduction

EVgo appreciates the opportunity to submit comments on California Energy Commission's (CEC) Second Draft Staff Report Tracking and Improving Reliability of California's Electric Vehicle Chargers (Draft Regulation).[1] As one of the nation's largest public fast charging providers, EVgo shares CEC's vision for an elevated customer experience for EV drivers and recognizes that a reliable, widespread electric vehicle (EV) charging network is crucial for scaling EV adoption needed to help achieve California's equity, clean energy, decarbonization, and air quality goals. The company continues to invest in customer-centric initiatives like Autocharge+[2] and EVgo ReNew[3] designed to further enhance the charging experience. EVgo also participates in industry forums such as the National Charging Experience Consortium (ChargeX)[4], Society of Automotive Engineers, and Underwriter Laboratories to promote codes and standards improvements that are foundational for seamless, reliable charging.

EVgo appreciates some of the refinements CEC has made to improve the clarity of the Draft Regulation. To further improve the Draft Regulation and ensure it functions as intended, EVgo makes the following minor recommendations:

1. To protect customer data and ensure robust uptime calculations, amend the data sharing requirements in §3125(b) to align with those specified in §3125(c);

[1] https://efiling.energy.ca.gov/GetDocument.aspx?tn=255597&DocumentContentId=91415
[2] https://www.evgo.com/autocharge/
[3] https://www.evgo.com/press-release/evgo-advances-network-enhancements-through-evgo-renewtm-program-releases-best-practices-to-promote-greater-industry-wide-charger-reliability/
[4] https://inl.gov/chargex/

2. Coordinate with ChargeX on a final successful charge attempt rate (SCAR) definition and establish a pathway in §3124(e) for charging network providers to exclude charging attempts that fail due to insufficient customer funds;
3. Clarify that any charger-level utilization and reliability data submitted to the CEC remains confidential and protected in §2505(a)(5)(B)(10);
4. Maintain discretion to authorize additional excluded downtime for vandalism on a case-by-case basis depending on the severity of equipment damage in §3124(d)(4); and
5. Invest in root cause solutions to bolster the customer experience over the long term and complement ChargeX efforts already underway.

The Appendix of these comments provides proposed amendments to the Draft Regulation in line with the recommendations above.

II. Recommendations

1. To protect customer data and ensure robust uptime calculations, amend the data sharing requirements in §3125(b) to align with those specified in §3125(c)

In the Draft Regulation, CEC proposes to require the collection of near real-time operative status via Open Charge Point Protocol (OCPP) 2.0.1 for publicly and/or ratepayer-funded networked chargers installed on or after January 1, 2026.[5] EVgo strongly recommends that the CEC not collect operative status data in this fashion for several reasons:

i. **OCPP logs contain personally identifiable information (PII):** AuthorizeRequest, RequestStartTransactionRequest, TransactionEventRequest messages all contain PII. Specifically, RFID card numbers and app start IDs are not anonymized in raw OCPP logs. Customer data protection is a core priority for EVgo, and for this reason, the company advises against policies or regulations that unduly disclose customer information to third parties.
ii. **OCPP messages do not accurately validate uptime:** OCPP status messages cannot be used to accurately verify EV service providers' (EVSPs') reported uptime figures because an "Unavailable" status message does not necessarily mean that a charger or connector is "down". For example, dual-port chargers that do not support simultaneous charging will set the second, unused connector as "Unavailable" when the other connector is in use. However, this message does not mean that the second connector is "down" but rather means that it cannot be used while the other connector is actively charging an

[5] Draft Regulation §3125(b)(4-5)

EV. With the transition to OCPP 2.0.1, the CEC would not be able to distinguish when a charger is in maintenance (and therefore "down") and when the charger/connector is "Unavailable" but otherwise "up". For these reasons, OCPP 2.0.1 messages do not accurately reflect the operative status of individual chargers.

In lieu of transmitting near real-time operative status data, EVgo recommends that CEC amend §3125(b) to align with the requirements in §3125(c). Specifically, EVSPs could be required to retain OCPP logs and, at the request of the Executive Director, provide that data to the CEC within 21 business days of the request. This approach is aligned with existing CEC grant agreements and allows EVSPs to remove sensitive customer data from OCPP logs while providing CEC with additional information in circumstances when it determines validation is needed.

2. **Coordinate with ChargeX on a final SCAR definition and establish a pathway in §3124(e) for charging network providers to exclude charging attempts that fail due to insufficient customer funds and**

While the National Electric Vehicle Infrastructure (NEVI) formula program and other federal programs have established some standard definitions and reporting for uptime, the same cannot yet be said for the successful charge attempt rate (SCAR) metric. In fact, EVgo is not aware of any existing standard for measuring charge success rates, though the KPIs being developed through ChargeX will help support a common national framework for evaluating and enhancing reliability. EVgo encourages CEC to coordinate with ChargeX on a final SCAR definition: ChargeX Working Group 1 is focused on developing measurable KPIs to define the EV charging experience and will release recommendations in a forthcoming report. Considering that many elements of CEC's Draft Regulation stem from federal programs and requirements, EVgo recommends that CEC review ChargeX-developed charging experience KPIs before adopting a final SCAR definition and implement a process to gauge EVSPs' respective abilities to report on SCAR. The SCAR metric will not function as intended if only some EVSPs are able to accurately report the metric, which would make accurate comparisons among EVSPs impossible.

As the SCAR metric is adopted, EVgo has minor additional suggestions to ensure the metric more accurately reflects network performance. EVgo appreciates the CEC's additions in §3124(e)(1)(A) that define when certain AuthorizeResponse messages should not count as a charge attempt, as these messages indicate charge attempt failures that are outside of charging network providers' control. However, the current list of messages does not account for scenarios where a charging session fails due to insufficient funds on the customer's card or an

expired card. Because charging network providers do not have control over what payment method their customers use, EVgo recommends that CEC establish a pathway in the Draft Regulation to exclude charging attempts from the SCAR metric that stem from customer payment issues. Failing to exclude these charge attempts will artificially lower EVSPs' SCAR figures.

Specifically, EVgo will respond to transaction event "Started" messages with "Blocked" in the event of insufficient funds on credit cards associated with EVgo accounts today. This step is done at the start transaction stage, rather than at the authorize stage, to ensure that customers will only ever receive a single pre-authorization on their account for the charging session. Placing the pre-authorization on the authorize transaction risks causing multiple pre-authorize holds if the customer fails to plug in on time on an app start, or if something goes wrong in the initial pre-charge routine and a second plug in is required. Adding an additional exclusion to charge attempts for start transaction events that come back blocked would allow EVSPs to maintain this process and avoid multiple customer pre-authorizations without causing an apparent drop in EVSPs' successful charge rates.

3. **Clarify that any charger-level utilization and reliability data submitted to the CEC remains confidential and protected in §2505(a)(5)(B)(10)**

EVgo maintains that charger utilization and reliability data is commercially sensitive and must be appropriately safeguarded by the CEC. Specifically, EVgo recommends that the CEC preserve the automatic confidentiality designation for charger- and port-level utilization and reliability data and expand this designation to port-level uptime and SCAR data.

Network usage data is proprietary, and EVgo uses this information to inform internal network planning and locate EV chargers in high impact areas. Publicly disclosing detailed charger utilization data in any form penalizes first-movers that have invested in California's EV charging ecosystem and unduly favors competitors and new market entrants that can exploit this data in an anticompetitive manner. EVgo recommends that any utilization data collected remain confidential, in alignment with current CEC practice.

While EVgo understands the CEC's intent behind collecting charger-level reliability data and publishing it, the self-reported nature of these metrics may result in reporting inconsistencies largely driven by differences in EVSPs' internal systems, making accurate comparisons among providers challenging. Given the likelihood of inconsistencies in reporting, EVgo encourages CEC to first assess the quality of the data it initially collects from EVSPs' before publicly releasing results.

By contrast, EVgo, other EVSPs, JD Power, and technology platforms already provide customers with an array of free, widely available information on public EV chargers and the EV charging experience on various charging networks. Popular platforms such as Google Maps[6] and PlugShare[7] allow drivers to see reviews from drivers that have previously visited charging stations, rate their own charging experience, and access real-time station information, serving already in many ways as the "Yelp" of EV charging. CEC's intent to publish regular reports on EVSPs' reliability metrics, which will inherently lag the current performance of charging stations, may inadvertently drive customers toward certain chargers based on outdated information. The EV charging field assessment that CEC has commissioned with UC Davis will also provide a view into the EV charging experience at thousands of chargers across the state.[8] These various platforms and public-facing materials have and will continue to provide drivers with useful information to further enhance their charging experience.

4. **Maintain discretion to authorize additional excluded downtime for vandalism on a case-by-case basis depending on the severity of equipment damage in §3124(d)(4)**

EVgo appreciates the CEC's consideration of vandalism as an excluded downtime category. In many cases, vandalized chargers can be remedied within five days as described in §3124(d)(4). However, vandalism of public EV charging stations has become more frequent and more severe in certain areas, often with the same charging station being repeatedly vandalized. In instances when cable and connector part availability is scarce, or when breakers, switchgear, or power cabinets are damaged, vandalism can take significantly longer than five days to repair and highly vandalized sites often need more intense review before they can be safely brought back online. Considering these circumstances, EVgo recommends that CEC retain the discretion to authorize additional excluded downtime for vandalism on a case-by-case basis depending on the severity of the equipment damage. This approach has been adopted in CEC agreements with EVSPs for past funding programs and provides the CEC with flexibility as it learns more about the prevalence of EV charging-related vandalism.

[6] https://blog.google/products/maps/new-ways-to-power-up-your-electric-vehicle-adventures-with-google-maps/
[7] https://help.plugshare.com/hc/en-us/articles/6327300783507-Station-PlugScores
[8] https://efiling.energy.ca.gov/GetDocument.aspx?tn=253390&DocumentContentId=88608

5. **Invest in root cause solutions to bolster the customer experience over the long term and complement ChargeX efforts already underway**

While this regulation will help ensure accountability in reliability and uptime metrics, additional work is needed on solutions to enhance the customer experience for EV charging in the long term. Given California's position as a national leader on transportation electrification, CEC can complement the work being done in ChargeX on root cause issues, including codes and standards issues. These efforts include bolstering the supply chain for replacement parts, supporting further interoperability initiatives like Charge Yard and VOLTS, and collaborating with CARB on vehicle interoperability issues, adapter regulations, and standardized port locations for vehicles. EVgo encourages the CEC to review its Connect the Watts best practice guides on reliability for additional solutions to root cause issues.[9]

III. Conclusion

EVgo appreciates the CEC's efforts to establish reliability regulations pursuant to AB 2061 and the agency's leadership on EV charging infrastructure. A convenient, seamless charging experience relies on close coordination between EVSPs, charging hardware providers, automakers, government, standards bodies, and other stakeholders. EVgo looks forward to working with the CEC and others in the EV charging ecosystem on solutions-oriented approaches to further enhancing the EV charging experience in California.

Respectfully submitted this 15th Day of May,

Noah Garcia
Manager, Market Development and Public Policy
EVgo Services, LLC
11835 W. Olympic Blvd., Suite 900E
Los Angeles, CA 90064
Tel: 310.954.2900
E-mail: noah.garcia@evgo.com

[9] https://site-assets.evgo.com/f/78437/x/9048a036b5/connect-the-watts_charger-reliability-best-practices_vfw.pdf; https://site-assets.evgo.com/f/78437/x/a8eff12c5f/connect-the-watts-vehicle-interoperability-best-practices.pdf?cv=1700020647715

Appendix – Amendments to Proposed Regulatory Language

1. **Align the operative status data reporting requirements for publicly and/or ratepayer-funded networked chargers installed on or after January 1, 2026 with the operative status data reporting requirements for publicly and/or ratepayer-funded networked chargers installed between January 1, 2024 and December 31, 2025 as specified in §3125(c)**

§3125(b):

For publicly and/or ratepayer-funded networked chargers installed on or after January 1, 2026, the recordkeeping and reporting agent of a publicly and/or ratepayer-funded networked charger shall either automatically transmit to the Commission or the Commission's designee the data specified in the following subsections (1) through (5) within 60 minutes of generation~~:~~ or record, and retain for six years from the date of recording, the operative status of each charging port for each publicly and/or ratepayer-funded charger on a fifteen-minute interval. The Executive Director may electronically request (sent to the most recent email address filed pursuant to section 3123(b)(1)(D) of this Article) that a recordkeeping and reporting agent provide the Commission with copies of the records retained pursuant to subsection (b) of this section. The charging network provider shall submit the requested records to the Commission within 21 days of the date of the request.

(1) Charger serial number.
(2) Charger ID — the unique identifier for the charger within the network provided by the charging network provider.
(3) Charging Port ID – the unique identifier for the charging port within the network provided by the charging network provider.
(4) All instances of HeartbeatResponse and BootNotificationResponse for each charger.
(5) All instances of AuthorizeRequest, AuthorizeResponse, RequestStartTransactionRequest, StatusNotificationRequest, and TransactionEventRequest for each charging port.

2. **Coordinate with ChargeX on a final successful charge attempt rate (SCAR) definition and establish a pathway in §3124(e) for charging network providers to exclude charging attempts that fail due to insufficient customer funds**

§3124(e):

*(1) **Charge Attempt**. A charge attempt occurs upon transmission of one or more of the protocol data units identified in following subsections (A) through (G) between the Central Management System and the charger as specified in OCPP Version 2.0.1 or a subsequent version of OCPP. Any number of the Protocol Data Units described in (A) through (G) of this subsection timestamped within a two-minute interval shall be counted as one charge attempt. Any number of TransactionEventRequest described in (D) through (G) of this subsection transmitted with identical identifier strings in the transactionId subfield of the transactionInfo field shall be counted as one charge attempt.*

(A) An AuthorizeRequest message transmitted by the charger to the Central Management System.
1. The AuthorizeRequest message shall not count as a charge attempt if the Central Management System responds with an AuthorizeResponse message with the status subfield of the idTokenInfo field set to any of the following responses:
a. "Blocked"
b. "ConcurrentTx"
c. "Expired"
d. "Invalid"
e. "NoCredit"
f. "NotAllowedTypeEVSE"
g. "NotAtThisLocation"
h. "NotAtThisTime"
i. "Unknown"
(B) A RequestStartTransactionRequest message transmitted by the Central Management System to the charger
1. The RequestStartTransactionRequest shall not count as a charge attempt if the following transaction event-start is returned "blocked" due to insufficient funds on a customer's payment method used to initiate a charge.
(C) A StatusNotificationRequest message transmitted by the charger to the Central Management System with the connectorStatus field set to "Occupied"
(D) A TransactionEventRequest message transmitted by the charger to the Central Management System with the eventType field set to "Started"
(E) A TransactionEventRequest message transmitted by the charger to the Central Management System with the triggerReason field set to "CablePluggedIn"
(F) A TransactionEventRequest message transmitted by the charger to the Central Management System with the chargingState subfield of the transactionInfo field set to "EVConnected"

(G) A TransactionEventRequest message transmitted by the charger to the Central Management System with the chargingState subfield of the transactionInfo field set to "Charging"

3. **Clarify that any charger-level utilization and reliability data submitted to the CEC remains confidential and protected in §2505(a)(5)(B)(10) and §2507(e-f)**

§2505(a)(5)(B)(10):

10. Information regarding a charger submitted pursuant to section 3123 of Article 2 of Chapter 12 if the information is one or more of the following:

a. Information provided pursuant to section 3123(b)(2)(K), 3123(b)(3)(a), or section 3124(a)(3)(A) through 3124(a)(3)(D), ~~or~~ 3125(b)(4) through 3125(b)(5), or section 3125(c) of Article 2 of Chapter 12.

b. Information provided pursuant to section 3123(b)(2)(A), (b)(2)(B), (b)(2)(E), or (b)(2)(I) and section 3125(b)(1) through (b)(5), of Article 2 of Chapter 12, unless the information relates to a publicly available charger or required to do one or more of the following: report to the National Renewable Energy Laboratory pursuant to Title 13, California Code of Regulations, Division 3, Chapter 8.3, Section 2360.4(k); or share data with third-parties pursuant to Title 23, Code of Federal Regulations, part 680, section 680.116(c).

4. **Maintain discretion to authorize additional excluded downtime for vandalism on a case-by-case basis depending on the severity of equipment damage in §3124(d)(4)**

§3124(d)(4)

*(4) **Vandalism or Theft:** Downtime caused by any physical damage to the charger or station committed by a third party unless the downtime was reasonably foreseeable and could have been avoided through reasonable repair or maintenance. This may include, but is not limited to, theft of charging cables, damage to connectors from mishandling, or damage to screens. A maximum of 5 days may be claimed as excluded downtime for each Vandalism or Theft event. A police report, timestamped photograph of the damage, or similar third-party documentation is required to claim this as excluded time. The Executive Director may authorize additional excluded downtime for extenuating circumstances on a case-by-case basis.*