EVSession feedback on 22-EVI-04 Electric Vehicle Charging Infrastructure Reliability

Please see attached document for EVSession's comments on 22-EVI-04

Additional submitted attachment is included below.

EVSession, LLC
16316 Kelly Park Circle
Huntersville, NC 28078
info@evsession.com

Docket: 22-EVI-04
Title: Electric Vehicle Charging Infrastructure Reliability

Dear CEC,

At EVSession, we applaud the work shown in the Draft Staff Report *Tracking California's Electric Vehicle Chargers* and provide the following feedback to strengthen the language and improve the outcomes leading to a more reliable, customer-centric EV charging infrastructure.

General

The strategy outlined on page 2 seems to take a wait-and-see approach before adopting tools to increase uptime of chargers. The markets have spoken in that OEMs are all moving away from the current CCS charging network providers to a more reliable solution. We strongly encourage the CEC to not wait, and, instead, adopt the uptime requirements as quickly as possible allowing the 2025 report to include EV charging network assessments instead of waiting until 2027 for this information.

It's noted on page 7 that the CEC has included reliability requirements in EV charging grants since 2021. What is the measured reliability of those installed units? Has that data been publicly audited? Again, we encourage the CEC to adopt more stringent data requirements from the start allowing the team to calculate the necessary uptime information without having to rely on anecdotal, sporadic field tests to determine charger health.

Section 5

Regarding the Inventory Reporting Requirements, we suggest that you include a Station or Site ID for each networked charger. This will allow for an easier way to programmatically bundle multiple charging units into a single charging station entity. This number can be the unique AFDC ID for the station, thereby forcing CPOs to update the national database and provide the visibility the CEC is seeking.

Regarding Table2: Utilization Reporting Requirements, we strongly recommend that all timing metrics be calculated at a minimum at the per minute level, or, more rigorously, at the second level. Providing utilization at the level of average hours per day leaves too much room for misunderstanding and possible manipulation of the data.

The Reporting Requirement section discusses the definition of downtime. This summary is a loose interpretation of the proposed regulatory language in 3124.c.1.D in that it implies that downtime starts when someone tells the network operator there's a problem. This should all be data driven. We have further comments on this below.

Section 6

We appreciate the staff providing visibility to some alternatives discussed. We hope it is very clear that Alternative 1 is a non-starter. We have seen where the industry has landed with weak or lack of regulation. We strongly recommend that the CEC take a more aggressive approach in requiring data to be collected and measured to a minimum 97% uptime requirement.

Alternative 2 is exactly what we're advocating. Frankly, it should not be the CEC's priority to fully assess the causes of EV charging reliability before moving forward with more stringent uptime requirements. There is plenty of existing evidence regarding the current reliability issues. In addition, the national ChargeX program is working directly on this with expected results that can be leveraged by the CEC.

Section 8

The third paragraph states "Collecting data…may lead to reliability improvements in the EV charging industry". We believe that collecting data is only 1 part of the solution. We suggest a more detailed wording such as:

> Collecting data, **analyzing, and regularly reporting the result to the public** will increase public insight into the causes of poor reliability…

Appendix A – Proposed Regulatory Language

§ 3021(b)43 – We agree with this definition of a Successful Charging Session. It covers a popular failure scenario where customers disconnect after several minutes because the charging unit is not delivering the rated power expected for the batter state-of-charge. This scenario must count as a failed charging session.

§ 3123(b) – We strongly recommend that the exclusion part of this paragraph be reworded. It could be interpreted that a charger under maintenance for months at a time could be excluded from the semiannual reporting requirements. It could also prevent new charging units from being included in the report since they will have met the criteria for not dispensing electricity at some point within the last 2 years. If that is the intent here, we strongly recommend that you consider changing this.   Publicly funding charging units put into service that fail and are not quickly maintained should count **against** a network's overall utilization rating. Otherwise, networks can decrease the denominator used in the utilization calculation giving them a better result.   One possible alternative wording could be:

> …excluding any charger that has been permanently removed from service in the reporting period:

§ 3123(b)(2)(K) – As mentioned above, we strongly recommend that utilization calculation data be based on seconds and would accept minutes as an alternative.

§ 3124(b) – In the defined formula for uptime, we note that the calculation denominator (T) is in minutes. We suggest seconds. Either way, the reporting requirement timescale should reflect the same as the formula.

§ 3124(c)(1)(B) – This section refers only to charging units using OCPP version 2.0.1 or higher. We know that between now and the 2026 deadline, many units will continue to use OCPP 1.6. We suggest that

language be added to cover version 1.6. Since OCPP 1.6 supports the same status values referenced in this paragraph, perhaps the wording can refer to OCPP 1.6 or higher.

§ 3124(c)(1)(D) – We recommend that the wording for this section be changed to prioritize internal diagnostics and data-driven approaches over customer notification and visual inspection. We have seen many instances where public chargers are marked Available when they have not been able to successfully complete a charge in days or weeks. This leads to overall dissatisfaction among EV drivers. If the clock doesn't start until someone complains, that allows for inaccurate reliability calculations. One possible change is:

> …but is not limited to, internal diagnostics, data analytics, or, if necessary, customer notification or visual inspection…

Conclusion

Again, we thank the CEC for providing the starting point with this Staff Report. We know from our own research that the data exists, and the technology is feasible to accurately track the health and reliability of the public EV charging infrastructure. We also know that we are a long way away from meeting our reliability goals at the national and state levels. Finally, we have ample anecdotal evidence that the weakness of the current EV charging infrastructure is deterring buyers from purchasing EVs. It's time that we use the power of government regulation to accelerate the successful buildout of our charging infrastructure and meet our 2030 transportation electrification goals.

Sincerely,

Bill Ferro
Founder, CEO
EVSession