

DOCKETED

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ChargePoint on Draft Reliability Field Testing Protocol

Additional submitted attachment is included below.

December 14, 2023

California Energy Commission
Docket No. 22-EVI-04
715 P Street
Sacramento, CA 95814

RE: Draft Reliability EV Charger Field Testing Protocol

Thank you for the opportunity to submit feedback on the draft Reliability Field Testing Protocol. ChargePoint commends the work of the CEC Staff and UC Davis to improve public understanding of EV station reliability. We offer these recommendations to ensure the testing protocol collects accurate, replicable, and conclusive information.

In summary, ChargePoint recommends that the protocol:

- Remove questions that will be challenging for testers to accurately assess, including those related to ADA compliance, cable length, and power sharing.
- Remove questions that are unlikely to lead to objective conclusions, including those related to feelings of safety, assessment of lighting, and assessment of customer service representatives' technical knowledge.
- Require testers to report all observed instances of station failure or disrepair directly to the network operator.

3.2.4 Is the {charger} ADA compliant?

ChargePoint is committed to making EV charging accessible. Our products aim to provide seamless experiences for all, including people with disabilities. Per design recommendations developed by the US Access Board, there are dozens of mobility and communication criteria that EV charging stations will need to meet to be considered ADA compliant. ADA compliance is not a question that can reasonably be assessed with a yes/no/not sure response, especially in the context of testers who are not specifically trained to evaluate accessibility features.

It is also important to note that federal ADA rulemaking has yet to finalize requirements for elements that will impact station and site design. This creates a challenge to determine the appropriate criteria to assess ADA compliance, and so for this reason, we encourage the question of ADA compliance to be excluded from this protocol.

3.2.6 What is the power sharing mechanism of {charger}'s ports? / 4.2.10 What is the power sharing mechanism of {Charger X}'s ports?

ChargePoint recommends eliminating this question from the testing protocol in both instances that it appears. It is generally not obvious to EV drivers, even trained testers, what, if any, power sharing mechanisms or policies are in effect at a particular location. For example, power sharing may only become apparent if multiple EVs are plugged in simultaneously to a paired station. Even then, power sharing may not initiate until the charging EVs exceed a certain power threshold. For example, if a site initiates power sharing when the power drawn exceeds 200 kW, two EVs charging at a combined 100 kW may not trigger power sharing, whereas two EVs charging with faster DCFC charging capabilities would. Because it would be challenging for testers to collect accurate and consistent information regarding the nature of the power sharing policies at each site, this information should not be collected.

3.3 Location Info

ChargePoint recommends eliminating all the questions in this section related to the testers' opinions on safety, lighting, and security from the protocol both because they cannot be used to draw objective conclusions and because they are not relevant to the question of reliability. For example, assuming most tests will occur during the daytime, it is arbitrary to assess lighting adequacy based on the number of visible lighting fixtures while the lights are off. Further, because this information will be collected by a small group of testers, it may not be representative of the feelings of the broader population of EV drivers. Such subjective assessments would be better collected via driver surveys in another study.

4.3.2.23 What is the length of the charging cable of {Port X} (in Feet)?

This question seems to conflate cable length with cable reach. This question should be eliminated from the protocol because cable length is irrelevant so long as a cable can reach the charge port. Because it is preferable to reduce cable length to reduce the weight and improve ease of handling, charging stations may include design elements that allow for shorter cables to achieve the needed reach. For example, ChargePoint stations may have mechanical arms that extend cable reach without adding length and weight to the cable. Measuring and reporting charging cable length is therefore unnecessary.

4.3.2.24. Does the charging cable of {Port X} reach the charging socket on {Vehicle Y}?

This question is the most direct way to identify cable reach issues that create problems for drivers. We note that some issues with cable reach may be alleviated if the vehicle is parked optimally (i.e., backing in to allow reach for a charge port in the vehicle rear). In the situation that a tester determines the cable does not reach the charging port, the tester should be required to take a photo of their parking position. Because vehicle charge ports may have a variety of locations on a vehicle (front, driver side rear, and driver side front), we encourage the UC Davis team to include an explanation of charge port location and appropriate parking position for each vehicle in the tester training.

4.4.30 Which of the following payment methods failed to initiate a charge after at most 5 attempts at {Charger X}?

ChargePoint supports the payment method testing protocol described by UC Davis at the November 30th Workshop, which involves assigning each tester a payment method to test for

each session and location. The tester would only cycle through the non-assigned payment methods if the assigned method fails to initiate a charge. This “waterfall” approach is preferred because it most accurately mimics the behavior of a typical EV driver, who would begin with their preferred method and, in the case of failure, try different payment methods until one is successful.

We note that drivers do not typically report failed payment attempts to the network operator if they are eventually able to authorize a successful session. Certain payment authorization failures may be challenging to track and diagnose remotely, so lack of reporting effectively creates a gap in understanding these failures. We request that, once the tester successfully pays for and initiates a session after any number of failed attempts, the protocol should require them to report which payment methods failed to the network operator, in the case of ChargePoint, ideally in-app via the “Report a Problem” button or by phone. This feedback will help networks identify patterns and root causes of failure that will be useful for inform proactive and preventative issue resolution in the future.

4.5 Getting Help

ChargePoint supports the requirement that testers contact customer support to resolve any failed or incomplete sessions. In the case of any station failure that prevents the user from initiating a charging session, testers should report their issues to Customer Service to help network operators identify stations in need of repair. For example, broken cables, latch clips, or screens may be immediately apparent upon arrival on site and prevent a tester from attempting to initiate a charging session at a particular station. Instead of simply marking these stations as broken and moving on, testers should report every instance of such issues to the network operator (by app or phone) even if they do not intend to initiate a session or expect to have the issue resolved before they leave the site. This will help ChargePoint and other network operators address physical issues that are challenging to detect remotely without driver reports. We welcome and encourage the use of this testing protocol to systematically flag stations for repair.

4.5.52. What type of contact information is available {Charger X}? [Checkbox]

In-app reporting should be listed as an option to submit a help request. For example, the ChargePoint app includes a “Report a Problem” button.

4.5.55. How would [you] rate the contacted customer service agent’s technical knowledge about EV charger?

This question is subjective, and the testers’ assessment of the technical knowledge of the customer service agent has little to do with the resolution of the problem. ChargePoint recommends this question be removed from the protocol.

4.5.56. How would you rate the general helpfulness of the customer service agent?

ChargePoint notes that the helpfulness of the customer service representative is a subjective question. We recommend supplementing this question with a simpler, more objective one – was the issue resolved, yes or no. If the UC Davis team is interested in assessing the quality of charging network customer service representatives, the question of helpfulness should be asked



independently of whether the issue was resolved to gauge elements such as responsiveness, effort, and accuracy.

Conclusion

We thank you for your consideration of these comments. Please do not hesitate to reach out with any questions you may have. We look forward to continuing to work together to understand and improve the charging experience for EV drivers in California.

Sincerely,

A handwritten signature in black ink that reads "Mal Skowron".

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