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ChargePoint Comments

Additional submitted attachment is included below.

April 1, 2022

California Energy Commission
715 P Street
Sacramento, CA 95814

Docket: 21-TRAN-03
Project Title: Zero Emission Vehicle Infrastructure Barriers and Opportunities

RE: Comments on Electric Vehicle Charging Infrastructure Reliability Workshop (March 11, 2022)

To Whom It May Concern,

ChargePoint thanks the Commission and Staff for their work to date to address this important issue. Reliability of EV charging infrastructure is important for today's drivers as well as to support increased consumer adoption of EVs. ChargePoint was encouraged by the dialogue on the recent workshop and believes all stakeholders have a shared goal of moving forward in a deliberate manner to increase reliability while ensuring the private sector can continue accelerating EV charging installations throughout the state.

Since 2007, ChargePoint has been creating the new fueling network to move all people and goods on electricity. ChargePoint is committed to making it easy for businesses and drivers to go electric, with a world leading electric vehicle (EV) charging network and the most complete set of charging solutions available today. ChargePoint's cloud subscription platform and software-defined charging hardware is designed internally and includes options for every charging scenario from home and multifamily to workplace, parking, hospitality, retail and fleets of all kinds. Currently there are more than 174,000 ports on the ChargePoint network across North America and Europe and an additional 300,000 ports accessible via roaming agreements.

Response to Questions Posed by CEC at March 11, 2022 Workshop
Should the CEC only focus on CEC funded chargers? How long should the reporting period and reliability standards be set for? What are feasible metrics for evaluating reliability?
ChargePoint supports the CEC initially focusing its reporting and reliability standards on future publicly available chargers funded by CEC. According to the Alternative Fuels Data Center there are currently 41,251 EVSE ports at 14,332 locations in California. Adding new reporting or

reliability requirements to these already installed stations would cause unplanned work and unforeseen cost for these operators.

By starting with future publicly available chargers funded by CEC, the CEC can ensure that funding recipients are building in the capabilities and the cost associated with both reporting and maintaining reliable chargers into funding proposals. Given the large number of chargers funded by CEC, this will also give the CEC a robust and diverse, yet manageable, data set it can use to understand reliability and reporting capabilities available today.

ChargePoint supports the CEC undertaking a robust process to develop reporting and reliability standards. Once this process is complete, ChargePoint believes it may be appropriate for other state agencies to adopt the same definition, reporting processes and standards. Consistency across agencies, while allow agencies to consider their own unique needs, will be beneficial to the EV charging industry.

ChargePoint believes that reporting and reliability standards should be aligned with any funding requirements for operations and maintenance plans. Absent any requirements for operations and maintenance plans, a default requirement of five years for reporting and maintaining reliability should be established.

Should the CEC seek to collect, aggregate, and public reliability metrics for the full network of public chargers in California (both CEC funded and non-CEC funded)? If so, how can this be done? What are feasible metrics for evaluating reliability?
ChargePoint acknowledges and understands the desire to understand the reliability of the full network of public chargers in California, however, as stated above, placing a retroactive reporting requirement on entities that have voluntarily installed chargers will require additional work and cost that may not have been considered by the operators of the charging stations.

Any data the CEC collects could include sensitive business information, ChargePoint encourages the CEC to ensure that operators of charging stations can provide this data confidentially and that any published data be aggregated and anonymized.

To the extent that the CEC determines it would be appropriate to aggregate metrics for EVSE irrespective of funding source, it would be critically important to ensure that such a data set provided visibility into the reliability of all EVSE using the same metrics, whether they are networked or not. If the CEC were to impose additional data reporting requirements that would only fall on networked EVSE, the additional cost could discourage site host from smart solutions that will provide enhance data on reliability as well as other functions important to the state's energy goals such as load management and demand response.

Who is responsible for reporting?
The owner and operator of the charging station should have ultimate responsibility for both reporting and compliance with any standards. Charging network, hardware, and operations and maintenance providers all can assist in providing information to owner and in some instances

may be able to assume this responsibility, however, ultimate responsibility should rest with the owner of the station.

How is data reported?
Data should be reported on an annual basis. For example, allowing owners 30-45 days after the close of the calendar year to submit reports should allow sufficient time to collect the information necessary to report. At minimum CEC should support electronic filing of data, CEC should explore the ability to use software or an API to serve as a reporting mechanism, however, that may require a longer time frame.

Should there be different reliability standards / metrics / reporting requirements for Level 2 and DCFC?
CEC should take an evidence-based approach to developing reliability standards. The CEC should seek to understand the reliability of the underlying components of chargers (both Level 2 and DCFC and any other type of charger which may receive funding) and then determine what a reasonable reliability metric or set of metrics is for each segment. If there is data to support a separate standard, the CEC could set separate standards for Level 2 an DCFC (and other types of chargers as appropriate). ChargePoint also support the ability of the site host to meet reliability standard through a sitewide standard in lieu of a reliability standard for each charger. Redundancy is a well understood means of providing reliability in many industries. Finally, ChargePoint believes that CEC should assess issues such as access to trained technicians across the state and shipping and supply constraints that might be more challenging in certain areas of the state and could impact the practical ability to meet any standards.

Are there publicly available data sets that can better inform the CEC's understanding of the reliability of existing EV charging infrastructure?
ChargePoint is not aware of any verifiable or independent, publicly available data sets that fully analyze charging station reliability using standardized data. ChargePoint cautions against drawing conclusions from crowdsourced applications as they generally do not capture a representative sample of the charging session at any single station or in the aggregate. ChargePoint also cautions against any data sources that do not provide consistent longitudinal data.

How can we ensure inoperable hardware is reported and information on down chargers is reported to consumers?
ChargePoint believes the most efficient way to handle reporting of inoperable hardware and the current status is through the EV charging network apps. Currently ChargePoint's app provides customers with the ability to easily "report a problem". When consumers report inoperable stations directly within EV charging network apps, it allows EV charging networks to seamlessly collect information and begin to diagnose any issues with charging equipment.

Additional Considerations
Phase-in Period

ChargePoint encourages the CEC to develop a phase-in period for reporting and any reliability standards. As noted above, CEC is a global leader on the development of a standardized approach to reliability, both in reporting and any standards, as such CEC should ensure that all actors in the EV charging ecosystem have adequate time to either adjust their current operations or develop new operations to meet any reporting or reliability standards. Over the coming years, there will be tens of thousands of charging stations installed in California, it is critical that CEC ensure that any approach to reporting and reliability standards be efficient at scale.

As ChargePoint recommended above, it may be appropriate to initially start both reporting and standards requirements as a condition of accepting future CEC funding in support of deploying publicly available EVSE. This will ensure that there is a proper incentive for the industry to develop the reporting capabilities and methods to meet reasonable reliability standards. This will also allow CEC the ability to learn from a robust, yet still manageable set of stations.

Temporal Differences

In the March workshop, CEC asked if different standards are appropriate for Level 2 and DCFC stations. In addition to ChargePoint's comments above on this topic, ChargePoint encourages the CEC to explore different standards for charging stations based on their installation dates or funding cycles. Practically, newer products will be more likely to provide more consistent and granular data. Additionally, as stations age, they incur normal "wear and tear" that inevitability impacts reliability and may also have fewer options for replacement parts and repair.
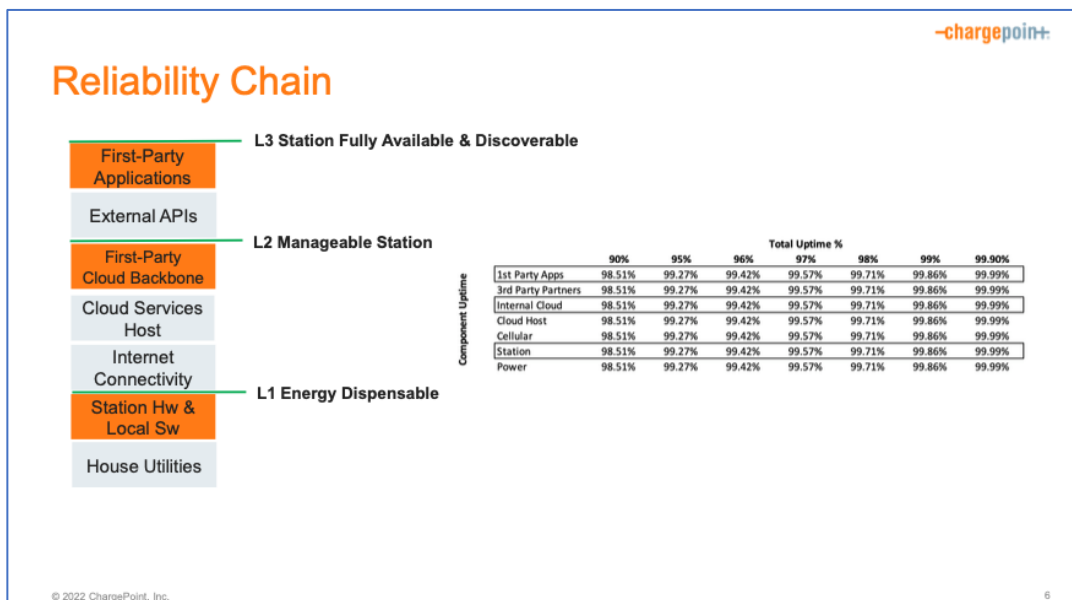
Pathway to Reliability Standards

ChargePoint supports CEC's efforts to develop reporting and reliability standards through a thoughtful and deliberate process that considers the needs of drivers, as well as the current and future capabilities of charging networks and hardware. ChargePoint encourages the commission to take an evidence-based approach to evaluating and eventually setting reliability standards. In the March 11th workshop, ChargePoint provided and illustrative example of how this process could be constructed to ensure that any reliability standards address the needs of drivers as well as an assessment of the technology available today and what may be available in the future (see Figure 1).

ChargePoint believes it is important for CEC to consider the building blocks needed to deliver a reliable charging experience to EV drivers. While charging providers should strive to provide the most reliable charging experience, there are practical and cost limitations that CEC should consider when developing any standards. Figure 2 (below), also provided at the Marth 11th workshop, is an illustrative example of the underlining component reliability needed to meet an overall reliability (or uptime) standard. The figure demonstrates that total station or site reliability is a function of the reliability of several building blocks, some of which are outside the control of both the owner of the station and the charging network and hardware providers.

Conclusion

ChargePoint thanks the CEC for its interest in EV charging station reliably. We look forward to working with CEC staff and stakeholders to chart an evidence-based path toward both reporting and reliability standards.

Sincerely,

Justin Wilson
Director, Public Policy
ChargePoint, Inc.