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ChargePoint Comments on VGI Standards

Additional submitted attachment is included below.

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ChargePoint Comments on Vehicle-Grid Integration Communications Standards (Docket 16-OIR-03)
December 14, 2016

ChargePoint appreciates the opportunity to provide comments on the Vehicle-Grid Integration (VGI) Communications Standards workshop held on December 7, 2016. The workshop discussed ISO 15118 as a VGI communication standard that could be implemented pursuant to the goals of Senate Bill 350, which has been referenced in CPUC Rulemaking 13-11-007.

Headquartered in Campbell, California, ChargePoint is the world's largest and most open EV charging network with more than 31,100 level 2 and DC fast charging spots, including more than 16,000 spots in California. Every 4 seconds, a driver connects to a ChargePoint station and by initiating over 19.4 million charging sessions, ChargePoint drivers have driven over 467 million gas free miles.

I. ISO 15118 as a VGI Standard

The ISO/IEC 15118 series of standards is a mature, viable platform for present and future EV charging infrastructure. ChargePoint has made investments into this standard in R&D projects including EPC 14-078 (funded under PON-14-310); participation in ISO/IEC standards development projects; and to support auto OEM EV roadmaps.

ChargePoint supports ISO 15118 but there is work be done on business models and system architecture to integrate this standard into California's present and future EV charging networks. ISO 15118 does not fully address some business and technical aspects of the EV charging infrastructure framework that's been effective and successful in CA and throughout North America. For example: the roles and motivations of the site owner and service provider. There is also the need to transition and scale implementation of this standard to support today's EV drivers, site hosts, and a potential continuing majority of EVs supporting non-standard communications.

II. ISO 15118 as it relates to other California policy goals

While ChargePoint is supportive of exploring ISO 15118 for VGI pursuant to SB 350, this particular standard may not be a panacea for all of the state's pending EV charging policy discussions related to standards.

SB 454 and Interoperability

The California Air Resources Board is expected to pursue a rulemaking to implement SB 454 in 2017 and address interoperability across charging networks. During the December 7 VGI standards workshop, it was suggested that this rulemaking include use of ISO 15118 to meet the goals of SB 454. While there is some merit to using ISO 15118 for authentication and payment, this standard alone is not adequate. ISO 15118 does not specify inter-network information exchange, which is essential for EV driver interoperability and roaming across charging networks. ISO 15118 is not a substitute for the standards needed to enable this inter-network information exchange. For example, ROEV, an industry trade association, is developing a standards-based roaming solution ("ROaming for EV Charging"). ROEV intends to adopt standards like NEMA 1.3/1.4 that support inter-network roaming between multiple heterogeneous charging networks, while allowing the use of any authentication and payment methods, including ISO 15118, within networks.

Title 20

The California Energy Commission is in the process of developing new regulations that may include data collection related to energy used at charging stations pursuant to SB 350 under Title 20 of the California Code of Regulations. It was suggested at the November 16 SB 350 data collection workshop that ISO 15118 could in some way be used to collect and report charging data pursuant to this policy goal. ISO 15118 can convey a charging station ID and usage data, but this would have to be correlated with other information (e.g. station location, owner/operator, etc.) in order to meet the currently proposed Title 20 requirements. Furthermore, ISO 15118 is not currently on every charging station, which would make it impossible to use this standard to track the load and utilization data on the existing fleet of charging stations in operation in California today.

Rule 21 Smart Inverter Working Group (SIWG)

The Rule 21 Smart Inverter Working Group is in its third phase for developing communication protocols for distributed energy resources (DERs) to interact with the grid. The SIWG has chosen SEP 2.0 as a preferred standard; however to date, EVs and charging stations have been outside of the scope of these rules. At the December 7 VGI standards workshop, there was a discussion on including EVs and EV charging stations in the scope of future SIWG phases. It is important to note that SEP 2.0 and ISO 15118 are very different in purpose, design, and technical details. Any effort to make them interact would require the development of complex gateway functionality, which is not a preferred approach to robust network design.

III. Other VGI "Standards"

There have been suggestions made that other VGI "standards" could be selected or supported to achieve the VGI goals and other policy goals of SB 350. ChargePoint would caution the joint agencies against promoting any "standard" that is still in early development or has not been certified by a standards-making organization. Identifying these proposed "standards" as such in Commission documents and presentations can create a false impression regarding their status and viability, distort the market, and be misinterpreted (as has occurred in some recent proceedings) to suggest Commission endorsement of standards that are not yet fully developed.

IV. Response to Proposed Working Group

The CPUC has indicated that a VGI standards working group, similar to the SIWG, will be developed to create a record on this topic. If the working group moves forward, it will be very important to select an impartial moderator that is not currently working on conflicting or competing proposals. ChargePoint supports the list of exemplary criteria identified in the CPUC Rulemaking 13-11-007 and encourages the Commission to use this list to structure the working group discussions. We would also suggest that the group meet less frequently than biweekly, as was suggested at the December 7 workshop, or that the meetings be kept focused to two hours or less in order to avoid dropout by parties already committed to many overlapping proceedings.

Thank you for considering our comments. Please contact me if you have any questions.

Sincerely,

Anne Smart
Director, Government Relations and Regulatory Affairs
ChargePoint