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EVgo Comments on Charging Interoperability Workshop

Additional submitted attachment is included below.

December 22, 2023

California Energy Commission
715 P Street
Sacramento, CA 95814

Re: Docket No. 22-EVI-06 – Comments In Response to CEC Statement on Charging Interoperability

EVgo appreciates the opportunity to submit comments on the California Energy Commission’s (CEC) Statement on Charging Interoperability (Statement). As one of the nation’s largest public fast charging providers¹, EVgo recognizes that a convenient, seamless EV charging experience is crucial for mass scale EV adoption needed to help achieve California’s energy, decarbonization, and air quality goals. To this end, the California Energy Commission has taken a thoughtful approach to exploring additional avenues to further enhance the EV charging experience through improved interoperability.

An elevated experience is mission critical for EVgo. The company has taken proactive steps to ensure an enhanced customer experience, including but not limited to, continued progress on EVgo ReNew™², the release of several best practice guides³ to promote codes and standards changes that will drive charger reliability and vehicle interoperability, and ongoing participation in forums such as the national labs’ ChargeX consortium⁴ and CharIN⁵ to address root causes of charging experience issues across the EV charging ecosystem. Based on these efforts, EVgo urges the CEC to continue coordinating with other stakeholders including automakers, electric vehicle supply equipment (EVSE) manufacturers and suppliers, utilities, and government agencies for continued enhancement of the charging experience in California.

EVgo provides the following responses to CEC’s Statement and its December 1 workshop to further improve charging interoperability as well as identify areas where CEC can play a beneficial role in supporting seamless, convenient charging:

1. Continue to monitor and support Plug & Charge (PnC) capability while coordinating closely with the California Air Resources Board (CARB) to address other vehicle interoperability issues;
2. Allow for ample time for industry review of CharIN CCS Extended;
3. Consider allowing implementation and certification costs for ISO 15118-20 only when they are ready for widespread implementation;
4. Consider the current limitations of the Open Charge Point Interface (OCPI) when assessing roaming capabilities; and
5. Place roaming in context with other strategies to advance interoperability.

1. Continue to monitor and support Plug & Charge (PnC) capability while coordinating closely with the California Air Resources Board (CARB) to address other vehicle interoperability issues

EVgo appreciates the Statement’s strong focus on PnC capability. Autocharge+, which was launched in September 2022 and is available on over 30 EV models, enables drivers with an EVgo account to initiate a charge session at EVgo charging stations simply by plugging in their vehicle. EVgo has seen successful uptake of this payment method on its network with 67% quarter over quarter growth because it offers drivers a seamless, easy way to charge. Autocharge+ also aligns with CEC’s interoperability statement, which seeks to support an “easier-than-gas charging experience” for drivers. For these reasons, EVgo encourages CEC to continue to monitor and advance PnC where possible to improve the EV charging experience for all drivers.

PnC capability via ISO 15118 is progressing and events like CharIN’s Festivals provide real-world opportunities to evaluate and scale PnC. However, there is currently no comprehensive conformance test for ISO 15118 and there is not yet industry-wide consensus on how EVs should store certificates used to enable PnC via ISO 15118.

To this end, EVgo recommends that CEC coordinate closely with CARB to ensure that future EV regulations require the adoption of the standards necessary to enable PnC. This coordination is essential, as technical requirements for EVSE and EVs must be harmonized to enable a more seamless, PnC-capable future. PnC will not work if only EVSE is required to implement ISO 15118 in isolation. EVgo recommends that CEC closely monitor the SAE Industry Trade Consortia (SAE ITC) process for supporting interoperability between root certificate authorities that enable PnC.¹ It is vital that industry reach consensus on issues raised in this consortium to support seamless, widely available PnC. In addition, CEC-CARB collaboration is necessary to resolve other issues at the EV-EVSE nexus: EVgo recently published a best practices guide to improve vehicle interoperability that extends beyond PnC and addresses other root cause issues that are necessary to facilitate a convenient, reliable experience for all EV drivers.²

2. Allow for ample time for industry review of CharIN CCS Extended

During the workshop, CEC staff identified CharIN CCS Extended as a potential certification for ISO 15118-2 conformance. EVgo remains optimistic about the development of CCS Extended as a conformance test; however, CharIN CCS Extended has not yet been finalized. EVgo recommends that CEC review CCS Extended once it is complete and allow the EV charging industry to carefully evaluate the conformance test to ensure that it successfully enables interoperability enhancements before adding CCS Extend as a requirement for CEC projects.

¹ <https://www.sae-itc.com/programs/evpki>

² <https://site-assets.evgo.com/f/78437/x/e2ecd6d60d/evgo-vehicle-oem-best-practices.pdf>

3. Consider allowing implementation and certification costs for ISO 15118-20 only when they are ready for widespread implementation

EVgo supports the allowance of implementation and certification costs for ISO 15118-20 in CEC projects. Implementing and certifying conformance to communication standards is a time- and resource-intensive effort that can take away from EVSPs' other efforts to promote underlying reliability solutions; allowing these activities to be categorized as eligible project costs can help ease implementation and improve industry adoption of these standards. However, EVgo asserts that widespread implementation of ISO 15118-20 is a long-term initiative and that the CEC should not prematurely require ISO 15118-20 for certain projects. Close coordination with CARB is necessary to ensure that technical requirements for EVSE are aligned with those requirements for EVs and that they are phased in on similar timelines.

4. Consider the current limitations of the Open Charge Point Interface (OCPI) when assessing roaming capabilities

EVgo agrees that OCPI is the primary protocol by which roaming agreements have been supported among Charge Point Operators (CPOs) and e-mobility service providers (eMSPs), and EVgo uses OCPI to enable roaming partnerships today.³ However, one key limitation of OCPI is that CPOs and eMSPs take discretionary approaches to implementing the base version of OCPI. In other words, it may take extensive time and resources to integrate disparate flavors of OCPI implementations between CPOs and eMSPs that seek to roam with one another. There is also no conformance test for OCPI, which makes it more challenging to execute roaming agreements. Because of some of these complexities, roaming can create issues that can inhibit the seamless customer experience that is the shared goal of both EVgo and the CEC.

Moreover, OCPI does not enable account holders with membership pricing at one CPO to be used at charging stations operated by another CPO. For example, EVgo provides a suite of voluntary plans on its EVgo-owned network that enable EVgo customers to access preferential charging rates.⁴ If an EVgo customer enrolled in an EVgo plan seeks to initiate a charge at a station operated by Roaming Partner X, the EVgo customer will not be able to access the preferred rates offered at EVgo charging stations. In this sense, OCPI is unable to translate the pricing benefits that EV drivers have on their preferred network to other roaming partners. Relatedly, OCPI does not enable CPOs to recognize customers of roaming partner networks when they contact the CPO's call center to resolve a charging issue. Again, this is a complexity that hinders an elevated customer experience.

Finally, enabling roaming via PnC is a complex topic that merits further discussion. There is not yet industry alignment on the storage and use of certificates to enable PnC via ISO 15118. For example, if an automaker only provides its EVs with the ability to store one contract certificate, it will only be possible to initiate a charge via PnC if the EVSE belongs to a roaming partner network. For this reason, there are significant scalability challenges with enabling PnC via roaming because all CPOs would need to roam

³ <https://www.evgo.com/partner-roaming/>

⁴ <https://www.evgo.com/pricing/>

with the one eMSP that the contract certificate belongs to. Further agency and industry alignment is necessary before PnC can be considered an option for charging on roaming partner networks.

5. Place roaming in context with other strategies to advance interoperability

Roaming is fundamentally a business-to-business decision premised on mutual benefit between CPOs and that decision is shaped by market dynamics in a particular geography. In the United States, the fast charging market is concentrated among a limited number of CPOs with varying business models and different approaches to roaming. EVgo encourages the CEC to consider this market context when contemplating roaming policy.

While EVgo is supportive of roaming and actively pursues agreements with other CPOs, roaming does not resolve root cause issues that hamper the EV charging experience. Moreover, existing CARB regulations already require publicly available EVSE to be equipped with credit card readers and require CPOs to allow any EV driver to initiate a charge at public stations without holding a particular membership or subscription.⁵ In other words, California EV drivers can charge at public charging stations today, including EVgo stations, without a member account if they choose. These payment requirements are a result of regulations that CARB already passed as part of the SB 454 process after deciding that requiring peer-to-peer roaming was out of scope and beyond the agency's purview.⁶

EVgo instead encourages the CEC to address other more pressing interoperability issues to enhance the EV charging experience with the goal of improving the percentage of successful EV charging attempts on the first try.⁷ Continued adoption of Autocharge+ and PnC will help achieve this objective, along with complementary efforts to adopt and revise relevant codes and standards to improve charging success rates as identified in EVgo's best practice guides.⁸

6. Conclusion

EVgo appreciates the opportunity to provide feedback on CEC's Statement. CEC plays a pivotal role in advancing interoperability solutions, and EVgo looks forward to continued coordination with the CEC in pursuit of the most effective strategies to improve the EV charging experience for all EV drivers.

⁵ https://ww2.arb.ca.gov/sites/default/files/2020-06/evse_fro_ac.pdf

⁶ <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/evse2019/fsor.pdf>

⁷ "[ChargeX] sets a goal that public charging stations nationwide charge vehicles the first time, every time."
<https://driveelectric.gov/chargex-consortium>

⁸ <https://site-assets.evgo.com/f/78437/x/a8eff12c5f/connect-the-watts-vehicle-interoperability-best-practices.pdf?cv=1700020647715>

Respectfully submitted this 22nd Day of December,

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