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Tesla Comments Interoperability Workshop

Additional submitted attachment is included below.

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December 22, 2023

Docket 22-EVI-06
California Energy Commission, Fuels and Transportation Division
715 P Street
Sacramento, CA 95814

RE: Comments on Staff Workshop on Electric Vehicle Charging Interoperability

Dear Energy Commission Staff,

Tesla appreciates the opportunity to provide feedback in response to the California Energy Commission's (CEC) Staff Workshop on Electric Vehicle (EV) Charging Interoperability hosted on December 1, 2023. Providing seamless, affordable, equitable and efficient access to EV charging infrastructure across California is critical. Tesla submits the following comments and considerations about specific topics mentioned in the Staff Workshop.

I. Update on the J3400 Standardization Process and Discussion of Connector Standards

In July 2023, the Society for Automotive Engineers (SAE) launched the standardization process for the North American Charging Standard (NACS) J3400 connector. SAE released the Technical Information Report (TIR) for the new J3400 standard in December 2023 which marks a critical milestone in the standards development process.[1] Despite the decade-long presence of the J3400 connector in chargers across North America, the rigorous standardization process will ensure that J3400 designed products meet the technical protocols to enable interoperability, with every EV working with every charger. We appreciate the CEC's commitment to exploring ways to support a one connector future through revised connector requirements.[2] Tesla remains committed to working with the CEC on ways to ensure connector interoperability with the J3400 standard in order to achieve an interoperable and unified connector landscape across California.

II. Feedback on ISO 15118-2 Conformance and the "CCS Extended" Certification

Tesla appreciates the CEC's continued efforts to ensure charging stations meet ISO 15118-2 hardware ready standards. We are generally supportive of conformance testing insofar as the testing method identified is compatible with all major connector types, including J3400. As explained in the Staff Workshop, there are currently no ISO 15118 certification testing procedures widely available. We caution the CEC against requiring any specific conformance test in the context of funding programs prior to enabling stakeholders to review and provide feedback on the proposed test method or pathway. Any forthcoming certification should not be prematurely imposed on any CEC programs without a technical assessment. Once made available and reviewed, Tesla would support conformance testing with the goal of making ISO 15118 implementation more consistent across the North American charging ecosystem.

One specific specification that could be useful to evaluate as part of a conformance test tool selection process is a specification in conformance tests for additional communication between the tester and the Device Under Test (DUT), which allows the tester to set the DUT in the appropriate state. This

[1] https://www.sae.org/standards/content/j3400_202312/
[2] Current and Potential CEC Actions: EV – Charger (A.2), Presentation - Staff Workshop on EV Charging Interoperability.

additional communication could range from a basic reset command to more comprehensive interactions. Enabling this functionality would facilitate automated test suite runs, which would encourage the industry to use continuous testing while making modifications to code. Developers of this function could take inspiration from the Android Compatibility Test Suite, which has a similar system.[3]

III. ISO 15118 and Open Charge Point Protocol (OCPP) Implementation and Certification Costs

The CEC should not directly fund ISO 15118 or OCPP implementation or certification costs tied directly to charging infrastructure deployment projects being funded by CEC programs. Rather, the CEC should focus on making certification more accessible to all companies. Any funding should focus on reducing the obstacles associated with certification and conformance testing – particularly the time and staff resources it takes to become certified. CEC funding could appropriately be leveraged to create an even playing field where all stakeholders have equitable access to ISO 15118 and OCPP certification processes. Tackling conformance from a systemic perspective by making certification testing more accessible would incentivize all charging providers, rather than only funding program participants, to meet interoperability standards. Generally, where feasible, certification processes could be streamlined and simplified to reduce the time and staff resources it takes to obtain a certification.

Given the unclear implementation pathway and timeline for migration from ISO 15118-2 to -20 and the many challenges that need to be resolved within the standard's development, the CEC should not prematurely fund the transition. Rather, the CEC should assess the readiness and modifications provided by -20, work with technical experts to overcome existing challenges and clearly tie those to the objectives of its programs. For instance, Plug and Charge should become ubiquitous amongst all public charging users but enabling bi-directional charging will likely be use case specific.

Lastly, the Staff Workshop described the potential of expanding ISO 15118 minimum requirements to projects beyond block grants.[4] The CEC should continue to focus on minimum requirements for funding programs and not expand the scope of requirements beyond this. Subjecting all privately funded charging projects to these requirements would hinder charging infrastructure deployment and innovation.

IV. Open Charge Point Interface (OCPI) Capability

We appreciate the CEC's exploration of protocols to enable roaming between charge networks. OCPI is sufficient as a standard for roaming agreements, and we are not aware of any competing standards. However, OCPI is an evolving standard, and any CEC requirements in the context of funding programs should provide companies with the flexibility to innovate and meet standards as they evolve. Charging providers will always need to collaborate beyond the OCPI standard to ensure ongoing interoperability. To encourage innovation, the CEC should focus on offering general guidance, rather than mandating the use of specific standards.

V. Discussion of Roaming Agreements

Tesla appreciates the CEC's intention to use roaming agreements as a mechanism to promote interoperability. The CEC should not become involved in the creation and implementation of roaming

[3] https://source.android.com/docs/compatibility/cts
[4] Current and Potential CEC Actions: EV – Charger (A.1), Presentation - Staff Workshop on EV Charging Interoperability.

agreements. Roaming agreements are a business imperative that should be driven by the private sector. The creation of roaming agreements is a collaboration between two charging businesses; accordingly, there is no role for the CEC in the actual deployment or creation of these agreements. As such, the CEC should not require charging networks to maintain a minimum number of roaming agreements or enroll with a specific roaming platform. The CEC should not be involved in the structuring of roaming agreements beyond providing technical support to smaller charging station operators. Charging providers are highly motivated to expand the number of drivers using their network. Accordingly, these business agreements should be left to the private sector.

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Tesla appreciates the opportunity to provide feedback on the CEC's Staff Workshop on Electric Vehicle Charging Interoperability. We sincerely appreciate the CEC's desire to achieve broad interoperability across California and we look forward to engaging on current and potential CEC actions in this space going forward.

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