

**DOCKETED**

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*Comment Received From: Francesca Wahl  
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**Tesla Comments on Draft Proposal ISO 15118 Hardware Readiness**

*Additional submitted attachment is included below.*

December 14, 2021

California Energy Commission  
Re: Docket No: 19-AB-2127  
1516 Ninth Street  
Sacramento, CA 95814

**RE: ISO 15118 Charger Communication and Interoperability Proposal – Version 2 Updated November 2021**

Dear Energy Commission Staff:

Tesla appreciates the opportunity to provide feedback on the ISO 15118 Charge Communication and Interoperability Proposal that the California Energy Commission (CEC) will apply to future funding programs for light-duty electric vehicle (EV) charging investments. The draft proposal indicates that it is intended to “help ensure that CEC-funded chargers are hardware-ready to support current and upcoming vehicle features, critical vehicle-grid integration capabilities, and an easier-than-gas user experience.”<sup>1</sup>

Tesla’s comments below focus on two areas of the draft proposal including the “temperature check” and the charging use case applicability for appropriateness of enabling some of the future features of ISO 15118.

**I. Temperature Check**

One of the key elements of the draft Proposal to assess the market readiness for applying the hardware ready requirement for CEC funded light-duty equipment is a temperature check in June of 2022 for direct current (DC) fast chargers and January 2023 for AC (Level 2) chargers. As proposed, the temperature check is focused on assessing the number of available charger brands with ISO 15118 ready hardware in order to determine whether there are enough ISO 15118-ready charger brands available to move forward with the proposed requirement for light-duty EV charging investments. If insufficient charger brands are available, the CEC will reassess and potentially postpone the requirement. We appreciate incorporating this temperature check into the requirement adoption process as it helps provide a realistic landscape to ensure consumer choice in charging equipment is not unintentionally limited.

There are, however, other factors that may impact the ability to implement the hardware ready requirements for EV charging infrastructure. In particular, there are supply chain considerations regarding PLC chips that could impact the ability to implement the relevant hardware ready components for some types of EV charging equipment. To ensure potential supply chain constraints are factored into the temperature check beyond the brand availability element, we recommend CEC staff add a metric for PLC chip lead time.

**II. Charging Use Case Application**

Under the current proposal, the CEC focuses on hardware ready requirements that can enable several sub functionalities of ISO 15118 including capabilities around plug and charge and other smart charging features. Further, the requirement applies to both DC and AC charging infrastructure. The Proposal indicates that “this proposal does not require automakers or charging providers to implement specific ISO

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<sup>1</sup> Draft Proposal, Nov 2021, p.1.

15118 use cases. It would simply require that CEC-funded stations have this latent capability and be ready for ISO 15118, if charging providers choose to utilize it.”<sup>2</sup>

While it is clear in the draft Proposal that the intent is not to mandate any specific use cases or applications of ISO 15118, it would be helpful for the Proposal to further acknowledge that just because a charger is ISO 15118 hardware ready, does not necessarily indicate that it is appropriate to utilize or require all the various aspects of ISO 15118 capabilities and use cases for that particular product. For instance, applying vehicle to grid (bidirectional) (V2G) for DC fast charging may not be appropriate in the near term or particularly relevant for DC fast charging, which is normally utilized by a customer for quick charging access and has limited flexibility to be shifted. Therefore, we recommend adding a disclaimer to the proposal that indicates the following:

- Establishing the hardware ready requirement for receiving funding does not take a position on whether utilizing all potential capabilities of ISO 15118 including V2G is appropriate or ready for all charging uses cases. For instance, applying V2G for DCFC, such as on highway corridors, is likely not a near term use case or priority for utilizing ISO 15118 hardware ready capabilities.

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Tesla appreciates the opportunity to provide feedback on the technical aspects of the draft Proposal for requiring ISO 15118 hardware readiness in the future as it applies to the CEC light duty EV charging funding programs. Having a clear timeline that provides temperature checks along the way to assess technology readiness is important.

Sincerely,

Francesca Wahl  
Senior Charging Policy Manager  
Business Development and Public Policy

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<sup>2</sup> Draft Proposal, November 2021, p.3.