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AB 2127 Draft Report Tesla Comments

Additional submitted attachment is included below.

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September 20, 2023

California Energy Commission, Fuels and Transportation Division
715 P Street
Sacramento, CA 95814

RE: Comments on AB 2127 Second Assessment Draft Staff Report

Dear California Energy Commission Staff:

Tesla appreciates the opportunity to comment on the California Energy Commission's (CEC) second EV Charging Infrastructure Assessment that was released on August 24, 2023, and is required to be completed per Assembly Bill (AB) 2127. We commend the CEC for supporting California's zero-emission vehicle goals through this comprehensive assessment of charging needs across the state. In the comments below Tesla provides the following recommendations:

- Update connector terminology when referring to what was previously known as Tesla's connector and is now being standardized under J3400 as the North American Charging Standard (NACS).
- Recognize the need for increased apprenticeship programs to address a potential shortfall of electricians needed to support charging deployment across all customer types including residential charging.
- Emphasize customer engagement in the VGI advancement framework in order to enable widespread benefits.

Connector Terminology

In the draft report's discussion of charger types and definitions, the 'Tesla' connector is referenced as a type of connector used for DC fast charging in North America.[1] We recommend that the CEC shift its terminology from the 'Tesla' connector to the North American Charging Standard (NACS) connector. In November 2022, Tesla renamed its previously proprietary connector to NACS to reflect the opening of the standard to other EV manufacturers.[2] Several automakers have since announced their intention to integrate NACS in their vehicles[3], rendering the term 'Tesla' connector outdated and no longer reflective of the current market landscape. Additionally, the NACS connector is currently undergoing standardization via the Society of Automotive Engineers (SAE) and will be known as J3400.[4] This should be reflected in the report.

Connector Interoperability

In the CEC's discussion of interoperability, the report asserts that "charging connector interoperability is the most visual and obvious example of interoperability, and much of the industry has made clear progress toward

[1] Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment, Page 24
[2] https://www.tesla.com/blog/opening-north-american-charging-standard
[3] https://media.ford.com/content/fordmedia/fna/us/en/news/2023/05/25/ford-ev-customers-to-gain-access-to-12-000-tesla-superchargers--.html; https://news.gm.com/newsroom.detail.html/Pages/news/us/en/2023/jun/0608-gm.html
[4] https://www.sae.org/standards/content/j3400/

standardizing around the CCS connector for fast charging[5].” This assertion should also recognize the current industry developments on J3400, as Ford, GM, Mercedes, Polestar, Nissan, Rivian, and Volvo have all announced integrating the NACS inlet in their vehicle fleet starting with MY 2025. In California, the NACS connector represents over 60% of DC fast charging plugs serving 72% of vehicles.

Apprenticeship Programs for Electricians

The CEC draft report references a 2021 National Electrical Contractors Association study regarding the addition of 7,000 electricians nationwide while experiencing the attrition of 10,000 electricians. This contraction of available electricians is a major challenge, as industry-wide electrification will require a significant increase in the number of available electricians, not solely for electric vehicle charging installations. This is anticipated to be most acute for residential electrical installations, from solar and battery storage to electric vehicle charging. A reduction in existing barriers to become an electrician or electrical contractor is essential to keep up with installation demand from electrification. This can include reducing the time and cost it takes to become a certified electrician, removing license restrictions on specific types of simplified electrical work, and increasing access to high-school feeder and electrical apprenticeship programs. For residential electric vehicle charging installations, which will make up a wide majority of installations, there should be simplified training and licensing programs established, which have lower barriers to entry and focus on electrical skills required for residential-specific jobs only. In contrast, the Electric Vehicle Infrastructure Training Program (EVITP), for example, is only offered to already certified electricians or those with a high number of electrician hours, resulting in an additional training and cost barrier for those wishing to access electrical jobs for publicly funded EV charging projects. It is essential that CEC programs and funding be focused on removing barriers and increasing the number of Californian’s able to enter the electrician and electrical contractor workforce.

Reliability

We commend the CEC for its ongoing engagement toward setting a reliability standard for publicly funded charging equipment as well as diagnosing the current issues that lead to an unreliable charging experience. Evaluating issues such as payment challenges or equipment failure for all levels of charging is important. At the end of the day, providing an excellent and reliable customer experience should be the top priority of any sustainable charging network. The CEC should ensure both publicly funded Level 2 and DC fast charging meet the uptime standard set by the state. In addition, new mechanisms should be included in vetting vendors and network providers in the context of public funding to ensure what is deployed is useful. New mechanisms could include assessing public review of vendors such as via JD power reporting, plug charge data or other public forums that rate customer experience.

VGI Advancement

We appreciate the CEC’s discussion of Vehicle Grid Integration (VGI) in the draft report. Specifically, we support the CEC’s recognition that site-level electrical readiness is a prerequisite to VGI. Many residences in need of charging infrastructure require significant electrical upgrades or other substantial renovations before charging deployment can proceed. We encourage further discussion on how the CEC can facilitate additional readiness programs for EV infrastructure. At the same time, in the VGI advancement framework, it is important to recognize the interconnection and customer experience elements to drive VGI adoption. If customers do not understand the value a VGI system provides them with and it in any way impacts their charging experience negatively, i.e. they cannot get from point A to point B when they need to, then a VGI program will not be

[5] Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment, Page 79

successful. The draft report acknowledges that "Customers may not understand the potential bill savings... Even those who do may hesitate to enroll in unfamiliar VGI rates or programs. Customer-friendly utility enrollment processes, increased product choices, and education campaigns may improve customer confidence and willingness to participate in VGI."[6] As customers enter more actively into VGI programs it is important to remember that an EV is still first and foremost a secure mode of transportation so any additional benefits will need to enable seamless integration. VGI will further be able to scale when customers feel comfortable with the benefits and when barriers to ease its adoption, such as interconnection constraints, are simplified. It is important for the draft report to recognize these dynamics.

Tesla appreciates the opportunity to provide feedback on the CEC's second EV Charging Infrastructure Assessment. We are committed to collaborating with the CEC to advance California's EV goals.

Sincerely,

Francesca Wahl
Senior Charging Policy Manager
Business Development and Public Policy

[6] Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment, Page 75