



December 18, 2018

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Submitted via email to: dms@cdfa.ca.gov

Re: Comments on Proposed Rulemaking for Electric Vehicle Fueling Systems

Dear Mr. Schnepf and Mr. Ferris,

The Electric Vehicle Charging Association (EVCA), California Electric Transportation Coalition (CalETC), Plug In America, and BTCPower respectfully submit the following comments regarding the Division of Measurement Standards proposed rulemaking for electric vehicle charging stations. We sincerely appreciate the Division's collaborative spirit over the last two years in discussing these proposed regulations with the electric-vehicle industry to both ensure proper consumer protections and address the challenges of charging station providers in complying with the regulation.

EVCA is a non-profit trade association representing nine electric vehicle service providers (EVSPs), software and equipment manufacturers, and installation and maintenance providers. EVCA's mission is to advance the goal of a clean transportation system in which the market forces of innovation, competition, and consumer choice drive the adoption of EVs and deployment of charging infrastructure.

CalETC is a non-profit association committed to the successful introduction and large-scale deployment of all forms of electric transportation. CalETC supports and advocates for the transition to a zero-emission transportation future as a means to spur economic growth, fuel diversity and energy independence, ensure clean air, and combat climate change. CalETC's

board of directors includes: Los Angeles Department of Water and Power, Pacific Gas and Electric, Sacramento Municipal Utility District, San Diego Gas and Electric, Southern California Edison, and the Southern California Public Power Authority. Membership also includes major automakers, manufacturers of zero-emission trucks and buses, electric vehicle service providers, and other industry leaders supporting transportation electrification.

Plug In America is the nation's leading independent consumer voice for accelerating the use of plug-in electric vehicles in the United States to consumers, policymakers, auto manufacturers and others. Formed as a non-profit in 2008, Plug In America provides practical, objective information collected from our coalition of plug-in vehicle drivers, through public outreach and education, policy work and a range of technical advisory services. Our expertise represents the world's deepest pool of experience of driving and living with plug-in vehicles.

Although California is leading the nation in zero-emission vehicle (ZEV) adoption, our state still has a long way to go to reach the goals in the Governor's Executive Order B-48-18: 5 million ZEVs on California roads by 2030 and specified levels of zero-emission vehicle infrastructure by 2025 to support the transition to these vehicles. Increased adoption of zero-emission vehicles is necessary for California to meet its climate, air-quality, and public health targets.

We understand and appreciate the necessity for the Division to adopt standards for EVSEs in order to protect consumers and ensure that purchasing electricity as a transportation fuel is straightforward and simple. We also recognize and support the Division's goal to ensure EV drivers understand what they are paying for and receive the energy they expect to receive through a charging session for what they pay. To that effect, we encourage the Division to ensure that the regulations are also straightforward and simple, and do not cause confusion in the marketplace, impose undue costs, or slow the progress of the ZEV market.

We support the majority of the proposed rulemaking, including the following sections:

- A. Application. The Initial Statement of Reasons, in addition to the regulatory language and current law, clarifies that the regulations apply only to "the commercial sale of electricity from publicly accessible EVSE to charge battery electric and plug-in hybrid electric vehicles." (ISOR, Nov. 2, p. 2.) We support this scope and agree with the Division that the regulations should not apply to EVSE that are owned, operated, and used by utilities, public entities, and municipalities; not available to the public, e.g., EVSE used for residential or workplace charging; that dispense electricity as a vehicle fuel at no cost to the consumer; or that deliver wholesale electricity. (ISOR, Nov. 2, p. 3.)
- S. Specifications: including charging customers for energy use either by kWh or MJ, identification and marking requirements, and the recent amendments on temperature limits;
- N. Notes: including load tests and testing methodology;
- UR. User Requirements: including selection, installation, use and display of pricing for users, and;
- Appendix D. Definitions.

- We also agree with the Division's decision to exclude the provisions of NIST Handbook 130 from this rulemaking.

However, there are a few requirements that we find infeasible, and respectfully ask the Division's consideration of alternatives that maintain the integrity of the regulation, while not overburdening charging station providers.

1. T.2.1. (a) Acceptance Tolerances

There is no electric vehicle supply equipment (EVSE) manufacturer that has working, field-tested and verified measurement technology for direct current fast chargers (DCFCs) that has an accuracy of $\pm 1\%$ (at the tip of the EVSE connector where it connects to the car) for type approval and $\pm 2\%$ for field deployed devices. As such, the measurement technology requirements should be delayed until this technology becomes commercially available.

While prototype technologies do exist, they are not field-tested, nor have they been commercially produced to be integrated with a functional EVSE, and are therefore not commercially available to use to comply with this requirement. As a result, it is impossible that any or all EVSPs will be able to comply with the enforcement deadline of January 1, 2020 for this provision.

Moreover, because many EVSPs rely on a supplier network to procure such technologies, the EVSPs are beholden to the hardware suppliers to comply with this requirement

Because these technologies are not yet commercially available, we respectfully request that the Division remove these provisions and delay consideration of the provisions regarding the acceptance tolerance testing for DCFCs until a measurement technology has moved beyond a lab-testing phase and begins the commercialization process. To ensure this requirement is appropriately phased in, we would support the Division establishing a working group with affected EVSPs to discuss technology developments, share information on the productization process, and collaboratively set a deadline for adopting such provisions that parallels the commercialization timeline.

2. Grandfathering Existing DCFC Infrastructure for Acceptance Tolerances Requirement

As we have established, the measurement provisions for DCFCs in these regulations are not commercially available and therefore cannot be brought to market under the timeline proposed by the Division in its draft regulations. Grandfathering DCFCs is necessary to avoid any stranded assets.

For the last decade, EVSPs have been deploying charging stations, both DCFCs and AC charging stations, across the state – many of which are operable today and well within their expected useful life. EVSPs continually improve their product lines and release new and improved station

models to better serve customers. In many cases this means newer models use newer technology, while technology integrated with older models is phased out.

Many older models of charging stations are still being used by customers, even though hardware manufacturers are no longer producing parts and components to make those stations. Even when the technology does become commercially available for DCFCs, it would make it impossible for some EVSPs to retrofit their existing infrastructure to comply with the tolerance requirements, as manufacturers are not making a technology to fit with older station models. As a result, EVSPs will need to remove old chargers and replace them with new ones that meet these requirements. Moreover, many charging stations were purchased using state, utility, or other public funds, and this public funding did not account for these retrofits. This burden will fall heavily on owner-operators of charging stations who will retroactively implement these changes at great costs. These burdensome costs will further limit capital available to deploy new charging stations at a time when the state has made ambitious goals toward transportation electrification. While Governor Brown has called for 10,000 DC fast chargers by 2025, if this requirement moves forward as is, EVSPs would have to shut down their older stations for being out of compliance. Similarly, in the case where a site host is an owner-operator, they would be more likely to turn off a system than seek to understand – let alone pay for – such burdensome retrofits. This can result in the stranding of public, ratepayer, or other funds and drastically slow or potentially halt the significant progress that the EVSE market has made over the past few years in California.

In order to keep California on track for meeting its ambitious goals for transportation electrification – and the complementary charging infrastructure that is needed to enable that future, we respectfully request the Division grandfather existing DC fast charging stations for their useful life so that the state can continue, and not take a step back in its progress to build out infrastructure. We also recommend the Division further consider the costs of retrofitting or replacing both existing AC and DC charging stations to comply with the proposed regulations, as grandfathering existing charging stations would more properly align with the state’s electrification targets.

3. Testing By Payment Method

The regulations as proposed would require end-to-end verification of accurate measurement and billing by payment method. To ensure a consumer-friendly charging experience, many EVSPs allow for multiple payment methods, including but not limited to: credit cards, RFID cards, Smartphone-based mobile applications, Apple Pay, Android Pay, and Samsung Pay.

We respectfully request that measurement testing be limited to the generation of correct billing determinants (e.g. total kWh x kWh rate + time), and that payment method testing be limited to the correct inclusion of these billing determinants in the generation of a bill.

4. Certified Installers

The regulations as proposed would require that a Registered Service Agency (RSA) install or repair the chargers. **However, given that no such certifying body currently exists, we respectfully request that this requirement be delayed until further notice and be taken up as part of stakeholder discussions – and until that time, continue to require that EVSE installers comply with current law.**

5. S.3.5. Temperature Range for System Components

We support the proposed amendments that add flexibility to sections S.3.5. and S.5.2. regarding temperature limits and appreciate the Division's acceptance of this recommendation. The regulation as proposed states EVSEs shall have "a temperature range of -40 °C to 85 °C". However, if the charging station or a component of it cannot meet this requirement, the regulations allow for the station to "be limited to the narrower temperature range" and be labeled as such. We strongly support the flexibility of this clause to allow EVSEs to operate at a lower temperature range, as there are indeed existing EVSE technologies in use that cannot meet a temperature range as high as 85 °C. However, in the proposed regulations it is not clear whether the EVSE's temperature range will still be tested.

Given the flexibility to label and operate the charging station at a lower temperature, we respectfully request the Division to add another sentence to this clause stating that the EVSE will also not be tested for a higher temperature range if it has been labeled as not being able to meet that requirement.

6. S.2.3.2. Transaction Termination

We recommend including an additional subsection, allowing the EVSE not to terminate the transaction in the event of a power loss if the EVSE has the ability to maintain communications and control through an uninterruptible power supply or source (UPS), e.g., a backup battery. We suggest referring to SAE J2894, *Power Quality Requirements for Plug-In Electric Vehicle Chargers*, as related to the outage description.

7. S.1.2., S.2.4., S.2.7. EVSE Indications

We are supportive of flexibility with providing information to customers. For example, the requirements in S.2.7. could be provided to the customer via cell-phone application, instead of via a digital display. EVSE providers and vehicle manufacturers make available cell-phone applications that allow for the continuous monitoring of the charging process so that the vehicle owner can see the vehicle's state of charge and associated cost for the energy consumed in real time. The EVSE could be labeled with all pertinent pricing and other information but does not need to have a digital display or receipt printer because all necessary information will be communicated to the consumer in real time.

We respectfully request that the Division clarify that the information in the sections on indicating elements may be communicated to the consumer through other means than only a digital display on the charging station.¹

8. Compliance Deadlines

The California Air Resources Board (CARB) is currently considering regulatory action regarding payment access and other measures for charging stations through its SB 454 Open Access proceeding. The proposed compliance deadlines for that rulemaking differ from the proposed compliance deadlines for the Division's proposal. Both of these rulemakings will impact existing and new charging stations; other states are watching to see how California handles both accuracy and access, so we believe it is important to set the right precedent.

We respectfully request the Division coordinate with CARB to ensure certainty and clarity with compliance deadlines for the two rulemakings so that charging station providers can update charging stations as few times as possible to be in compliance with all requirements. Because CARB's implementation timeline is currently 2020 or later, depending on the charging station type, we suggest that the Division align with CARB's timeline.

Thank you for your consideration of our comments. Please do not hesitate to contact us if you have any questions or would like to discuss further.

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¹ This recommendation reflects the views of EVCA, CalETC, and BTCPower only, and not of Plug In America.