DOCKETED	
Docket Number:	22-EVI-06
Project Title:	Vehicle-Grid Integration
TN #:	269499
Document Title:	Darryl Little Jr. Comments - CALSTART Comments on CEC Plug and Charge and Roaming Regulatory Concepts
Description:	N/A
Filer:	System
Organization:	Darryl Little Jr.
Submitter Role:	Public
Submission Date:	4/15/2026 4:15:33 PM
Docketed Date:	4/15/2026

Comment Received From: Darryl Little Jr.
Submitted On: 4/15/2026
Docket Number: 22-EVI-06

CALSTART Comments on CEC Plug and Charge and Roaming Regulatory Concepts

Additional submitted attachment is included below.

CALSTART, Inc.

48 S. Chester Avenue
Pasadena, CA 91106
(626) 744 – 5600
www.calstart.org

April 15, 2026

To: California Energy Commission

RE: Plug and Charge and Roaming Regulatory Concepts

CALSTART, headquartered in California, is a nonprofit organization dedicated to the advancement of zero emission vehicle (ZEV) and infrastructure technology. CALSTART is the administrator for block grant incentives on behalf of the California Energy Commission, including Energy Infrastructure Incentives for Zero-Emission Commercial Vehicles (EnergIIZE), Communities in Charge, and Zero Emission School Bus Infrastructure (ZESBI).

CALSTART offers the following recommendations and responses in response to the CEC Plug and Charge and Roaming Regulatory Concepts Workshop.

Recommendation: Align "Publicly Available Charger" Definitions

Among CEC funding programs and regulations, there are various definitions of "publicly available chargers". There is an additional definition used within California Air Resources Board (CARB) regulation and programs. Differences in application and interpretation between different regulatory codes for reliability, uptime, payment methods, and network roaming create challenges for industry and certain shared charging use cases in particular.

Ambiguity can arise in the context of shared fleet hubs with multiple fleets, with contract access, which could be considered public charging, shared charging, or fleet charging. For MHD charging infrastructure, the challenge is more pronounced. Early-stage MHD deployment is often centered around fleet-based depots, clustered logistics hubs, and shared charging sites designed to ensure utilization and financial viability across multiple fleets. Between CARB and CEC funding opportunities, a more consistent definition within the regulatory code will be easier to apply within funding programs and give the market a more widely applicable definition to inform business models. Inconsistent definitions and applications result in reduced revenue certainty, slower private investment, and underutilization risk for funded assets, particularly for managed access and shared use models.

CALSTART recommends aligning definitions of publicly available charging within the Plug and Charge draft regulation and regulation considered for AB 2697 with the Reliability and Uptime regulation definition[1]. This will promote regulatory clarity within CEC rulemaking, support streamlined adoption across CEC grant programs and better align with CEC's updates to prior CARB definition of "Publicly available Electric Vehicle Supply Equipment (publicly available EVSE, publicly available DCFC EVSE, or publicly available Level 2 EVSE)".[2] We also recommend consideration for shared charging use cases and further refinement for what is public charging and what is shared charging.

Question: Applicability of Regulation

Is the CEC's intention to apply these regulations to only major network service providers implementing DCFC and Level 2 publicly available stations, or all publicly available stations?

Responses: ISO 15118 and Plug & Charge

CEC Question 1: Is ISO 15118-2 appropriate as a minimum?

Yes, ISO 15118-2 is appropriate as a minimum requirement today for DCFC. It represents the most mature, widely deployed, and interoperable baseline for enabling secure, automated EV charging in the current U.S. market. However, it should be framed as a transitional minimum, with a defined pathway toward ISO 15118-20, which expands functionality to support bidirectional charging, enhanced AC use cases, and future grid-integrated services.

ISO 15118-2 specifically defines the application layer communication protocol used in current Plug & Charge implementations. [3]It enables:

- Seamless "plug and charge" user experiences without the need for mobile applications or RFID authentication
- Secure, encrypted communication using TLS and certificate-based authentication (PKI)
- Support for both AC and DC charging scenarios, with the highest level of maturity in DC fast charging deployments

From an implementation standpoint, ISO 15118-2 is:

- The only version broadly deployed in commercial environments
- Supported by major OEMs and charging networks (e.g., Ford, Porsche, Electrify America)

[1] California Code of Regulations Chapter 12. Alternative and Renewable Fuel and Vehicle Technology Program Regulations. Article 2 § 3121: Definitions (a) (41).

[2] California Air Resources Board (CARB), Electric Vehicle Supply Equipment (EVSE) Standards – Attachment A: Final Regulation Order, adopted [2022], available at https://ww2.arb.ca.gov/sites/default/files/2020-06/evse_fro_ac.pdf.

[3] Marketing Team. (2025, November 24). *ISO 15118 explained: plug & charge, V2G, and smart charging — EV range*. EV Range. https://www.evrange.com/ev-range-insights/what-is-iso-15118?.

- Increasingly integrated into Combined Charging System (CCS) infrastructure [4]

Available data indicates that adoption is already significant, with a large portion of newly deployed chargers supporting ISO 15118-2 functionality. This demonstrates that the standard is not theoretical, but operationally viable and scaling in real-world deployments.

Overall, ISO 15118-2 represents the most practical and effective minimum standard for the current market. It provides the right balance between:

- Technical capability (Plug & Charge functionality and secure communications)
- Market readiness (broad OEM and infrastructure support)
- Implementation feasibility (existing deployments and established tooling)

CALSTART recommends adopting ISO 15118-2 as a minimum requirement from the effective date of the regulation, while simultaneously signaling a transition toward ISO 15118-20 to ensure long-term alignment with evolving grid-integrated and bidirectional charging capabilities.

CEC Question 3: How does the implementation of Plug & Charge for AC differ from DCFC (if at all)?

CALSTART recommends taking into consideration that many EVSE providers and manufacturers have prioritized DCFC compliance with new technological requirements over AC. EVSE providers and manufacturers may benefit from additional time and flexibility in adopting new technological requirements.

CALSTART also recommends that the CEC continue to consider market-ready charger models when introducing new technology requirements within GFO and block grants to avoid a situation where too few models are eligible. Otherwise, this could increase project timelines and increase EVSE costs for incentivized charging stations.

CEC Question 5: What challenges with Plug and Charge implementation merit additional discussion?

CALSTART encourages the CEC to consider the pathway to implement these requirements in block grants. Applying retroactive additional requirements dating from 2023 may introduce additional complication to block grant implementation.

[4] Szakály, M., Köhler, S., & Martinovic, I. (2024, April 9). *CURRENT AFFAIRS: A security measurement study of CCS EV charging deployments*. arXiv.org. https://arxiv.org/abs/2404.06635?.

CALSTART also would like to amplify the key challenge of limited interoperability, as noted in the "California Energy Commission statement on Plug & Charge implementation in California":

> *"The numerous combinations make interoperability harder and costlier to achieve for Plug & Charge stakeholders. Inconsistent testing and certification practices across standards, and the general lack of interoperability testing standards and facilities, compound these issues."*

Limited ability to provision contract certificates on electric vehicles and the complexity of roaming agreements and pricing transparency are also key challenges to Plug & Charge implementation.

Response: Conformance Testing

CEC Question 1: Beyond ISO 15118 –2 and OCPI 2.3 conformance as a minimum, what other areas should be considered to accelerate availability of interoperable Plug and Charge?

CALSTART encourages the Commission to consider how conformance testing will apply to programs that maintain their own eligible equipment list with CEC verification required. EnergIIZE and Communities in Charge both have eligible equipment lists with processes for intake and review aligned to program requirements and definitions. EPRI also has a Vetted Product List for utility programs.

A streamlined way for CEC to communicate which equipment has already completed CEC review would help reduce duplication of effort.

Conclusion

We respectfully request that you consider the above recommendations to strengthen California's zero-emission vehicle infrastructure, which is essential to advancing the state's transition to clean transportation and meeting its climate commitments.

Thank you for your time and attention.

Sincerely,

Darryl Little Jr.
State Policy Director
CALSTART, Inc.

Alyssa Haerle
Director, Infrastructure Incentive Administrative
CALSTART, Inc.