

DOCKETED

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**Siemens and Plug In America (â€œJoint Partiesâ€) Comments following
2020 CALeVIP Projects Workshops**

Additional submitted attachment is included below.



VIA ELECTRONIC FILING

September 6, 2019

California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket No. 17-EVI-01: Siemens and Plug In America (“Joint Parties”) Comments following 2020 CALeVIP Projects Workshops

On August 13, 14, and 27, 2019, the California Energy Commission (CEC) held workshops to present CALeVIP projects for 2020. Staff presented a project overview, including eligibility requirements and application process as well eligible equipment. In this letter, the Joint Parties respectfully provide our comments on the projects as proposed.

Siemens is the first corporation of its size to commit to being net-zero carbon by 2030 including a full transition to clean transportation. We are motivated by the goal of driving socio-economic benefits that stem from reducing GHG emissions and adoption of clean energy. Siemens employs over 4,000 personnel in California, generating over \$2 billion in in-state sales. With the intent of generating business efficiencies for our customers at workplaces, transit, government, utilities, fleet and other segments, Siemens manufactures/assembles its EV chargers and EVSE electrical components on both coasts of the US with two facilities in Southern California. Siemens’ Plug to Grid™ eMobility product portfolio encompasses hardware, software and services which are currently deployed in 35 countries globally – our solutions are geared to maximize the abilities of EVs to act as Distributed Energy Resources, as well as enable the effective harnessing of renewable sources.

Plug In America is the leading national consumer voice promoting 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.

Summary

The Joint Parties strongly recommend modifications to various aspects of the 2020 CALeVIP Incentive Projects as described by staff at the workshops. While it is a fact that significant investments are needed to meet California’s 2025 and 2030 targets, the investment should be directed with the sole criterion that *the public is the prime beneficiary from the public funds being*

utilized. By *public*, we refer to the EV driver (existing or potential), the customer (site owner), and California residents generally.

To *maximize the benefits* of the CALeVIP proposed projects, *reduce costs* and to ensure *fair, competitive practices* are being utilized in the selection of grant awards, we recommend that the CEC address the following issues that currently plague the program:

1. **Lack of technical standardization**
2. **Award process favoring speed over cost**
3. **EVSE allocation not based on accurate EV driver charging experience**
4. **Lack of universal payment access to public charging**

1. Lack of technical open standards

Siemens has consistently urged the CEC in past dockets to fund EV charging equipment for LD vehicles **only** if chargers use open technical standards for communicating with the “cloud.”

- While we appreciate the inclusion of some hardware technical standards language in the CALeVIP program, the actual statement that was utilized was **imprecise and open to interpretation**. It stated: *“Use an open standard protocol as a basic framework for purposes of network interoperability.”* A wide variety of non-interoperable solutions would fulfill this very general requirement.
- The proposed revised language in the workshop presentation – *“Must be able to revert to an open communication protocol standard”* – is even more diluted and from, a technical point, meaningless. Again, without further specificity, a wide variety of non-interoperable solutions would be possible.¹
- The proposed language allows the continued use of proprietary technologies to **create vendor lock-in** for the combination of chargers and network services and **prevents customer-switching**. As written currently, “open standard protocol” can be, and for some vendors is, from cloud to cloud, which does not solve the vendor lock-in problem. This lack of precision in the standards requirement **renders this interoperability “requirement” useless and allows for public funds that the CEC has been entrusted with to continue to create and protect a proprietary charging market.**

The need is for chargers from one vendor to be able to communicate with networks from other vendors. Using an open standard communication protocol (e.g., OCPP 1.6) between the

¹ For this “revert to” concept to work, the requirement to ensure practical and cost-effective interoperability would be, “Must be able to revert to an open communication protocol standard through a remote firmware upgrade executed by a third party over the existing charger communication network, with the communications, firmware, firmware delivery software, and technical support provided at no cost by the original charger manufacturer.”

charger and the network (cloud) is a critical part of this, but the vendor(s) need to commit to cooperating to enable the integration as well.

We would revise the recommended requirement in the CALeVIP program to read as: *“Use an open standard protocol for communicating between the charger and the network, including either a) certification from an independent third party such as the Open Charge Alliance or b) a commitment by the vendor of the charger to cooperate with other vendors providing network services to use such protocol to integrate the vendor’s chargers. For example, Charger Vendor A must cooperate with Services Vendor B to integrate the chargers with the services, and vice versa. Such cooperation must be provided at reasonable labor costs and no software license or other technology fees.”*

This requirement should hold for both Level 2 and DCFC.

- The most widely used, by far, open communications standard for chargers is OCPP. OCPP was developed, and is being further developed, in an open, transparent, and fully inclusive manner by an international, non-profit organization, the Open Charge Alliance. Both the organization and the standard are open to anyone. While OCA is not one of the generally known standards bodies such as ANSI, ISO/IEC, or SAE, it operates under essentially the same principles, and the OCPP standard is now in the process of being incorporated into IEC 63110. More importantly, OCPP has been very widely accepted and adopted by vendors into their technologies and, from a very pragmatic viewpoint, *already provides interoperability between chargers and networks for a wide variety of vendors both in the U.S. and Europe.*

There is also a certification process for OCPP. Today, any vendor can self-certify using a software conformance test tool provided by OCA. This fall, OCA will open its OCPP Certification Program.² Independent test laboratories in Europe, North America, and Asia (Singapore) will offer conformance testing open to OCA members as well as non-members. Beyond certification, the “bright-line” test is whether one vendor’s chargers can work with another vendor’s network – as noted above, this is already the case for most of the vendors in the U.S. and Europe. This bright-line test is simple, straightforward, and practical: show interoperability in practice – and it has been shown by many vendors.

The Joint Parties also feel the need to debunk additional myths about open standards propagated by certain parties. One myth is that open standards put a ceiling on functionality; the reality is that standards establish only the floor. Every cell phone needs a minimum of a microphone, speaker, and standards-based RF transceiver, but the requirement for these elements does not prevent adding many more, such as in a smart phone.

² OCA, OCPP Update, Lonke Driessen-Mutters, June 12, 2019. Available at <https://assets.ctfassets.net/ucu418cgcnau/4Q45ttV2NNTWMIZFJ1xkVs/a0c8e1144b58b9e430ff2fbbbd925c29/D1-13E - June 2019 EPRI IWC - Standards Update OCPP update June 12th 2019.pdf>

Another myth is that the words “capable of operating with a specified standard” is sufficient to ensure interoperability. Interoperability requires that the device be capable of operating with the specified standard in a practical manner. For example, a charger must be capable of working with another vendor’s network at low cost, efficiently, and practically. If a site visit is needed or a component needs to be replaced or a high licensing fee must be paid in order to modify a charger to be able to work with a network that uses the open standard, then the charger is not interoperable from a practical perspective.

2. Award Process

- The Joint Parties believe that competitive awards are a better way of achieving the state’s goals than are “first come, first served” programs. In the latter case, awardees receive awards based on speed alone and barely meeting the minimum criteria for the awards. There is no benefit for the awardee to do due diligence, shop around, and find the low-cost, high-quality solution. *In fact, there is a disincentive to do so, because it will delay the grant application.* With competitive awards, the awardees are, by definition, selected as the best among the applicant pool. Accordingly, the projects chosen in competitive solicitations will, almost by definition, better achieve the state’s goals and drive taxpayer benefits via cost efficiencies. The CEC should revise the CALeVIP project finance allocation and direct that projects be awarded via a competitive bidding process. This could be accomplished without slowing the program by having monthly deadlines and committing one-twelfth of the funding each month, selecting the best applications submitted during the month. Losing proposals could be carried into the subsequent month but should still have to compete on equal terms.
- We also recommend that the CEC review the current cost structure of CALeVIP programs to ensure more efficient and effective use of public funds.

3. EVSE Allocation not based on accurate EV Driver charging experience

In the Joint Parties’ (and others’) opinion, the residential segment is *where 70% of charging is expected to occur*³. We hold this opinion for Gen 1 of EVs (around 100 miles range) as well as Gen 2 (200 miles+ range). *The second-most prevalent “long-dwell” segment where charging occurs is at the workplace, especially for drivers who may not have the ability to charge at home.* This segment covers other long-dwell facilities such as hotels.

Given that the average car drives 40 miles per day and that 200-mile BEVs are becoming prevalent, the need for public charging will become essentially a “road trip/highway” requirement (or possibly for TNCs without self-owned charging depots in the urban/semi-urban areas), as well as for EV drivers who cannot charge at home due to the lack of a parking space or living in an MUD.

In this fast-emerging scenario, Siemens strongly urges the CEC to review its CALeVIP allocation based on:

³ - see Maryland PC44 Scenario Analysis in the Joint Parties Proposal, page 18

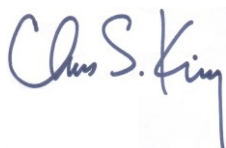
- a) **customer segments** (residential vs workplace vs MUD)
- b) **public charger type** (level 2 vs DCFC)
- c) **location of public chargers** (level 2 vs DCFC)

We believe more resources should be provided for charging facilities at *long-dwell* sites such as the residential and workplaces segments. The CEC should also review the power level of the charger vis a vis the location; for example, are shopping centers the right locations for level 2 public chargers? A case can be made for 200-mile BEVs – for which frequent top-ups are not needed – that the hassle is not worth it for the limited kWh that can be received in a 30-minute charging session. Or better still, how can the utilization rates of public chargers at a shopping mall be increased – maybe open it up for use for nearby MUDs after closing hours?

4. Universal access to public charging

Once CARB’s proposed SB 454 open payment regulation is approved, the CEC should start enforcing the regulation to require all charging stations at public locations meet payment standards that allow for universal access. This translates to the equipment going forward, of all EVSE at public locations– where fees are charged – having the specified credit card readers. The CEC should start enforcing the regulations in CALeVIP to prevent further use of public funds to promote “proprietary payment methods” favored by some service providers.

The Joint Parties appreciate the opportunity to comment and look forward to a more impactful and cost-effective CALeVIP program next year.



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