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It's Electric Plug & Charge Comments for CEC Docket No 22-EVI-06

Attached please find comments from Nathan King, CEO of It's Electric, Inc. Thank you for the opportunity to comment and for your consideration.

Additional submitted attachment is included below.

California Energy Commission
Docket Unit, MS-4
Docket No. 22-EVI-06
715 P Street
Sacramento, California 95814

April 15, 2026

Re: Plug & Charge and Roaming Regulatory Concepts (Docket No. 22-EVI-06)

It's Electric submits these comments in response to the CEC's invitation for public input on Plug & Charge and roaming regulatory concepts under Docket No. 22-EVI-06. As a curbside EV charging company focused on deploying Level-2 charging infrastructure in urban environments across California, we have a distinct and practical perspective on the proposals under consideration — one shaped by daily experience designing, deploying, and operating L2 charging stations at scale.

We strongly support the CEC's goals of improving the EV driver experience and reducing fragmentation in California's charging ecosystem. We write, however, to urge the Commission to carefully account for the meaningful technical and economic differences between AC Level-2 charging and DC fast charging as it develops minimum standards. A one-size-fits-all approach risks slowing the very deployment of charging infrastructure that Californians need most. Please find our responses to the Commission's questions below.

In addition to detailed responses drafted below, we wish to emphasize the following high-level considerations, as it specifically relates to Level-2 AC charging:

- **Cost:** ISO-15118 increases the cost of hardware development (certifications), manufacturing (added componentry) and operations (platform fees). These costs are passed on to the driver, or absorbed by the charger operator.
- **No OEM Consensus:** North American EV manufacturers have not coalesced on a Level-2 AC PnC strategy. A station-side mandate produces no benefit without support from OEMs.
- **Standards Immaturity:** ISO 15118-20 North American AC standards are unfinished; there is no reliable completion horizon.

Level-2 AC charging is already a very convenient driver experience - transactions typically take about 20 seconds using an app or RFID card. Adding PnC won't decrease the time required to initiate a session, in fact a typical PnC session requires around 30-120 seconds for the exchange and validation of certificates. In short, we see no benefit, and only harm, by requiring ISO-15118 PnC for Level-2 AC chargers.

<u>ISO 15118 and Plug & Charge</u>

1. Is ISO 15118-2 appropriate as a minimum?

Yes, for DCFC. Since ISO 15118-2 is already required for DCFCs, this would represent no change with respect to DC charging. The more significant question is how the standard applies to AC charging stations, which we address in detail below.

We also want to flag a concern about the evidentiary basis for the Commission's characterization of the current landscape. The CEC has cited a charging network provider survey as evidence that both hardware and software for ISO 15118-2 are widely adopted. However, we were unable to locate these survey results on the CEC's website, and the survey appears to reflect only DC fast charging deployments. We are aware of only a small number of AC charging stations that support ISO 15118-2. Even on the DC side, the CEC has acknowledged that the rollout is fragmented, with Plug & Charge functioning for some EV and DCFC combinations but not others. The list of compatible EVs is growing but remains far from comprehensive. The Commission should be careful not to overstate the current state of readiness.

2. Is the industry ready for ISO 15118-20 for Plug & Charge today, or will it be soon?

No. Mandating ISO 15118-20 today would be premature. The standard is complex, more directly relevant to V2G than to Plug & Charge, and its test cases have not yet been finalized. We are not aware of any fully ISO 15118-20-compliant EVs currently on the road.

It's Electric is actively working to implement ISO 15118-20 as part of a CEC-funded grant project developing V2G capabilities for our AC curbside charging product. We are in the early stages of this work and do not anticipate completion until mid-2028, and only then assuming the standard is finalized within a reasonable timeframe and compliant vehicles are available for sufficient real-world testing. We share this not to suggest the standard lacks promise, but to give the Commission an honest picture of where even a motivated AC charging developer stands today.

3. Are there cybersecurity, hardware, backward/forward compatibility, or other concerns to consider as part of a proposed minimum?

Yes, and these concerns are most acute for AC charging stations. Please see our response to Question 4, which addresses the hardware and compatibility challenges in detail.

4. How does the implementation of Plug & Charge for AC differ from DCFC, if at all?

The differences are significant and the Commission should weigh them carefully.

DC fast chargers already include the powerline communication hardware required by ISO 15118, because PLC communication is inherent to the fast-charging process itself. AC charging stations operate on a simple, analog PWM signal under J1772 and do not require PLC hardware. As a result, most AC charging stations do not include it. Adding Plug & Charge to an AC charging station requires both additional hardware and firmware changes; it is not simply a software update.

California has more than 46,000 public Level-2 ports. The vast majority were not designed with PLC hardware, and retrofitting them would be costly and in many cases technically infeasible. AC charging stations are robust and often demonstrate long service lives, meaning the installed base will turn over slowly regardless of what new requirements apply going forward. Furthermore, even if all existing AC charging stations were replaced with PnC-capable units, few EVs on the road today support the feature for AC charging.

The feedback we receive most consistently from drivers is a desire for more charging stations, deployed faster, with high reliability. Plug & Charge adds a measure of convenience (no need to take out a card or phone) but does increase session activation. The relative simplicity of AC charging already produces fewer activation issues than DC charging, making the feature a lower priority for most AC charging users.

We are also developing an innovative interim solution worth the Commission's attention: a detachable smart cable that uses low-cost communication hardware and LIN-CP signaling on the control pilot wire to link a driver to their billing account. This enables a plug-and-charge-like experience for existing EVs using standard analog PWM signals, with no app, no RFID card, and no ISO 15118 hardware required in the charging station. Drivers simply plug in and charging begins. Practical innovations like this deserve room to develop alongside formal standards.

5. How should CEC support public key infrastructure (PKI) for Plug & Charge?
We do not have deep expertise in PKI implementation and defer to others better positioned to advise the Commission on certificate authorities and certificate trust lists. We would note that whatever PKI framework the CEC develops should be evaluated for compatibility with the phased AC implementation approach we recommend below.

6. What challenges with Plug & Charge implementation merit additional discussion?
The regulatory threshold for determining which charging networks are subject to proposed requirements deserves careful reconsideration. The current proposal applies the same 100-station threshold to AC and DC charging networks alike. One hundred AC Level-2 charging stations may represent installations in a single parking lot or two, which hardly constitutes a network in any meaningful sense. By contrast, 100 DC fast chargers could span 10 to 25 geographically distributed locations, which more naturally fits that description.

The lower cost of AC charging infrastructure is a feature, not a bug. It encourages new market entrants who provide critical long-dwell urban charging that larger DCFC operators do not prioritize. Imposing compliance burdens at such a low threshold risks chilling exactly the kind of competition and deployment California needs. **We recommend the Commission eliminate the requirement for ISO-15118 for Level-2 AC chargers, or as middle-ground approach, raise the L2 threshold to at least 1,000 stations.**

<u>**OCPI and Roaming**</u>

7. Is OCPI 2.3 appropriate as a minimum?
Yes. OCPI 2.3 is the appropriate version to require as a minimum standard. It supports Plug & Charge and AutoCharge, expands data fields for parking, accessibility, and tax information,

and provides flexibility for networks to define and add additional fields. These are meaningful improvements for the driver experience and for the broader interoperability goals this docket is designed to advance.

8. What challenges exist with transitioning to OCPI 2.3?

There is currently no certification process for OCPI 2.3, as it has not yet achieved international standard status. One interim alternative would be for networks to provide internal self-attestation of compliance. Whether a formal certification process will exist by the time any CEC rulemaking takes effect depends on whether the EV Roaming Foundation prioritizes developing that certification on a compatible timeline. For example, if rulemaking is complete by January 2027 and takes effect January 2028, a certification process is possible but not certain. The Commission should monitor this closely and build appropriate flexibility into any compliance framework.

9. What challenges exist to developing or implementing roaming agreements between providers or networks?

The primary barrier is not technical. Implementing a roaming integration requires establishing a relationship with a roaming partner, setting up backend and frontend IT systems, and training operational staff. This is feasible. But in our experience, charging networks tend to prioritize roaming integrations according to partner network size. This systematically advantages large, incumbent networks that already have integrations with one another, while smaller networks find their prospective integrations perpetually deprioritized. OEMs establishing roaming integrations for their branded EV networks take a similar approach, being selective about which networks they partner with. The result is a piecemeal roaming landscape that adds friction for drivers who arrive at a charging station without a roaming relationship with their home network.

It's Electric partners with SWTCH as our charging station management system, which supported California's AB 2697 because SWTCH feels it strikes the right balance, authorizing the CEC to establish roaming standards for major networks while preserving flexibility for networks to implement those integrations bilaterally or through a hub-based intermediary. We encourage the Commission to use that authority meaningfully to address the structural disadvantage smaller networks face.

10. What challenges with roaming implementation merit additional discussion?

As noted above, the motivational and structural dynamics that favor incumbent networks over smaller entrants are the most pressing issue here. Standards alone will not resolve this without clear enforcement mechanisms and a framework that obligates larger networks to engage with smaller ones in good faith.

<u>**Conformance Testing**</u>

11. Beyond ISO 15118-2 and OCPI 2.3 conformance as a minimum, what other areas should be considered to accelerate availability of interoperable Plug & Charge?

We do not have specific proposals in this area beyond what we have outlined above regarding AC charging hardware readiness and phased implementation. We would note that interoperability testing should account for the distinct characteristics of AC charging, not only DCFC, as the two present different implementation challenges.

12. What are the recommended minimum set of must-test cases from ISO 15118-4?
We are not deeply familiar with ISO 15118-4 specifically. The CEC's stated approach of aligning must-test cases with what CARB requires on the vehicle side strikes us as logical and practical, ensuring that charging station and vehicle testing regimes are complementary rather than divergent. We support that approach and defer to those with deeper expertise on the specific test case selection. We also note that section -4 has not been updated since 2018, an indication that broad consensus around this standard has not been achieved.

Conclusion
It's Electric is committed to expanding access to reliable, convenient EV charging for all Californians, and we welcome the Commission's leadership in developing a more interoperable and seamless charging experience. We ask that the regulatory framework reflect the distinct economics and technology of Level-2 charging, so that standards designed to help drivers do not inadvertently slow the deployment of the infrastructure they depend on.

We appreciate the opportunity to comment and are glad to discuss any of these points in further detail.

Sincerely,

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