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Siemens Comments on Level 1 Chargers and Interoperability

Additional submitted attachment is included below.

VIA ELECTRONIC FILING

January 8, 2021

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

Re: Comments on Light-Duty Electric Vehicle Infrastructure Allocation, Docket Number: 20-TRAN-04

Siemens appreciates the opportunity to file these comments in the above-captioned proceeding.

Siemens is a leading provider of EV charging infrastructure technology, including chargers, make-ready equipment, software, and services. We are committed to supporting California's transition to electrified transportation, including electrifying our own fleet. We have adopted a corporate goal of net zero carbon emissions by 2030. A primary reason for our support of electrification is the economic benefits accruing to all citizens, including those in disadvantaged communities.

General Comments

Siemens generally supports the overall project proposal by CEC Staff, including Rural Charging, Ultrafast Charging at Airports, Advanced Technologies, and Level 2 Charging at Multi-Unit Dwellings. Siemens discourages the use of public funds for technology limited to Level 1 charging.

Level 1 Charging

While supporting the overall program, Siemens suggests that the Level 1 Charging proposal be amended. Level 1 charging is the provision of 120VAC power to a location accessible to electric vehicles, enabling use of Level 1 chargers that come with all EVs. Adding Level 1 charging capability consists of running a 120VAC electrical circuit to the location and providing an electrical outlet. The circuit is protected by a circuit breaker in the circuit panel.

While we agree that running a Level 1 circuit provides the important benefit of charging access, it is probably already obsolete now that most EVs being purchased are BEVs and most have ranges of 200 miles or more. For such a vehicle, a Level 1 charger is inadequate and would take 40 hours or more to fully recharge a 200-mile vehicle.[1]

The solution is straightforward. Rather than running a 120VAC/15A circuit, the installer would run a 240VAC/50A circuit and provide the same type of plug a clothes dryer uses. The total cost

[1] - https://www.jdpower.com/cars/shopping-guides/how-long-does-it-take-to-charge-an-electric-car#:~:text=In%20fact%2C%20most%20EVs%20come,for%20up%20to%20200%20miles

is only incrementally higher, and EV drivers then have the ability to either use the outlet directly or purchase an off-the-shelf Level 2 charger.

Accordingly, Siemens proposes that the funding allocated for Level 1 chargers (actually 120VAC outlets) be used instead for 240VAC outlets that support plug-in Level 2 charging.

Interoperability

In various proceedings, CEC has expressed the goal of interoperability in EV charging for its many benefits. First, interoperability reduces the risk of stranded assets, because a new EVSP can take over installed chargers if the original EVSP exits the market. There are examples in Pennsylvania and elsewhere of stranded expensive, DC fast chargers due to the EVSP exiting the market. Second, interoperability protects customer choice; the charger owner can change their EVSP in the future if prices are raised or for other reasons, or can purchase chargers from other manufacturers while keeping the same EVSP. In short, interoperability prevents vendor lock-in. Third, interoperability lowers costs through the increased competition between manufacturers.

Our first suggestion is that the CEC adopt a definition of interoperability for use in its EV charging infrastructure programs. Siemens has adopted a definition based on our global experience, including participation in hundreds of standards committees over the years. Our proposed definition:

> Interoperability means the ability of hardware, software, or a communications network provided by one party, vendor or service provider to interact with or exchange and make use of information, including payment information, with the hardware, software or communications network provided by a different party, vendor or service provider.of chargers, meaning that chargers from one vendor can be connected to the network of another vendor.

Our second suggestion is that interoperability be required for all CEC-funded EV charging programs. This requirement not only builds on the CEC's previous commitments to interoperability, but also works to achieve the interoperability benefits cited above.

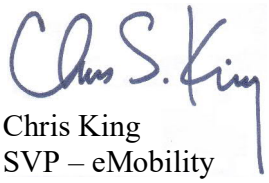
The requirement should be that interoperability standards be followed where available and where significant market adoption has occurred. If no standard has been defined, nor implemented by any companies in the market, then the requirement would not apply. This may occur with some of the advanced technology pilots.

Conclusion

For the reasons given above, we respectfully suggest the CEC modify the Level 1 charging program proposal, adopt an interoperability definition, and require that all CEC-funded programs

require the use of interoperable technology (including data exchange), where open standards exist and have been adopted by more than one company in the market.

Siemens appreciates the opportunity to comment.



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