



April 10, 2023

James Kwon,
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ENERGY STAR for EVSE
1200 Pennsylvania Avenue N.W.
Washington, D.C. 20004

Re: Siemens Comments on Energy Star for EVSE Draft Version 1.2

SUBMITTED VIA EMAIL: evse@energystar.gov

Siemens appreciates the opportunity to comment on the proposed revision to Energy Star requirements for EVSE. We appreciate the effort and analysis that went into the draft, including appropriate consideration of comments made by stakeholders, such as those referenced on page 8. Overall, Siemens supports the changes that are included in the draft, with a few exceptions as noted below. We urge the EPA to adopt Version 1.2 as expeditiously as possible to reflect the rapid evolution of the EVSE industry (also noted on lines 197 and 198 on page 8).

Comments

Definitions 10) Credit Card Reader

The draft definition of “Credit Card Reader” is limited to accessing payment card “information encoded on the magnetic strip or stripe of a payment card.” This definition is in conflict with the technical guidelines adopted for the National Electric Vehicle Infrastructure Program (NEVI) and the Charging and Fueling Infrastructure Program (CFI), which includes contactless credit and debit cards. 23 CFR 680.104, which governs these programs, defines “Contactless payment methods” as “a secure method for consumers to purchase services using a debit card, credit card, smartcard, mobile application, or another payment device by using radio frequency identification (RFID) technology and near-field communication (NFC).” Per 23 CFR 680.106(f), all chargers in the NEVI and CFI programs must “(1) Provide for secure payment methods, accessible to persons with disabilities, which at a minimum shall include a contactless payment method that accepts major debit and credit cards...”

Therefore, to be consistent with the NEVI and CFI guidelines, the definition of “Credit Card Reader” should be, “A scanner, reader, or any other electronic device that is used to access, read, scan, obtain, memorize, or store, temporarily or permanently, via information encoded on the magnetic strip or stripe of a payment card or via information transferred via a contactless connection using radio frequency identification (RFID) technology or near-field communication (NFC).”

Definitions 12) Revenue Grade Meter

Siemens respectfully objects to the definition of “Revenue Grade Meter” (RGM) as a meter that meets the requirements of ANSI C-12.20-2015. The reason is that the states follow NIST



Handbook 44 (HB 44-2023, Section 3.40) in certifying EVSE used for public charging, and the HB 44 requirements differ significantly from ANSI C-12.20-2015. There are many differences, including metering accuracy, display requirements, data storage and retrieval, minimum measured quantity, environmental requirements, temperature requirements, testing criteria, and more.

As noted in the comments to the RGM definition, the goal of the Energy Star revision is “consistency with the state regulatory requirements” (lines 114 and 115 on page 5).

Therefore, given the extensive differences between the ANSI standard and what states are using – HB 44 – Siemens respectfully urges that the definition of RGM be restated as follows: “Revenue Grade Meter (RGM): A meter that meets the requirements of NIST Handbook NIST HB 44-2023, Section 3.40.”

Section 3.3.1

The allocations for cellular, Wi-Fi and ethernet should be adders and NOT mutually exclusive allocations. In some use cases, all three communication channels are in use at the same time. Here is a use case where all interfaces need to be operational simultaneously:

- a. Cellular for upstream internet connectivity,
- b. Wi-Fi for downstream internet connectivity to non-cellular EVSEs (i.e., where the EVSE is acting as a router), and
- c. Ethernet for load management via connection to a building management system (BMS) or home energy management system (HEMS).

Each of the added functions provides net overall energy savings for the user. First, the use of an EVSE as a router eliminates the need for a more energy-intensive cellular connection for child units connecting via Wi-Fi to the parent unit having the cellular connection. Second, the ethernet connection supporting load management further supports energy efficiency achieved through the load management functions, for example, lower power consumption during peak times when line losses on the grid are higher.

Therefore, given the benefits of combining these functions, the allocations for cellular, Wi-Fi, and ethernet should be additive.

Siemens recommends that the following existing Energy Standard for Small Network Equipment is used when adding additional power budget for chargers that work as network routers: [Small Network Equipment Key Product Criteria | ENERGY STAR](#)

Section 3.10.8

ISO15118 has no direct relation to smart charging and making overall grid utilization better. Smart Charging is implemented by controlling the maximum output power of the charger, a command that comes from the backend, and is irrespective of the identification of the vehicle. ISO15118 is primarily used for vehicle identification for payment purposes. In the future it can be used to enable V2G controls, but there are no AC chargers that support this function available in the market, and chargers cannot necessarily be upgraded to have V2G functions just because they include ISO15118 capabilities.



That said, ISO15118 can play an important role in vehicle identification for payment purposes, and a power budget should be allocated to it.

This section requires that EVSE have the necessary hardware to support ISO 15118. The note for this section (lines 422-429 on page 16) states, “At this time, EPA intends compliance with this criterion to be confirmed through documentation reviewed by a certification body, rather than with a test procedure.” The problem with this proposal is that there is no existing certification body for ISO 15118. In the absence of such an organization, Siemens respectfully suggest that self-certification is the appropriate solution.

Conclusion

Siemens appreciates the opportunity to comment. We request a meeting with you to discuss our response to the comment period at your earliest convenience. To facilitate the meeting please contact abigail.campbell@siemens.com or (202) 264-9381.

Sincerely,

John DeBoer
Siemens eMobility – North America Lead