Mr. James Kwon
Climate Protection Partnerships Division
U.S. Environmental Protection Agency
Washington DC 20460

December 6, 2018

Subject: ENERGY STAR® Test Method for DC EVSE Draft 1

Dear Mr. Kwon:

This letter contains comments from Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE) on the ENERGY STAR® Test Method for DC Electric Vehicle Supply Equipment (EVSE) Draft 1. We thank the United States Environmental Protection Agency (U.S. EPA) for the opportunity to participate in this process.

The signatories of this letter, collectively referred to herein as the California Investor-Owned Utilities (CA IOUs), represent some of the largest utility companies in the Western United States, serving over 32 million customers. As energy companies with an extensive portfolio of efficiency programs, we understand the potential for equipment efficiency specifications and standards to cut costs and save energy while maintaining or increasing consumer satisfaction. We have a responsibility to our customers to advocate for sensible test procedures, specifications, and standards that accurately reflect the climate and conditions of our respective service areas, to maximize the positive effects of these efforts. We strongly support U.S. EPA's efforts to develop a DC EVSE test method and offer the following comments to improve the draft test method.

Section 4 Test Setup
Ambient Temperature: Section 4(E) of the draft test method requests feedback from stakeholders on the proposed test condition ambient temperatures. PG&E, SDG&E, and SCE agree that the test method should require testing DC-output EVSE under representative conditions, especially because higher temperatures may result in higher energy use due to EVSE cooling, as noted in our June 25, 2018 comments.

Section 5 Test Conduct
Configuration: Section 5.1(A) would require that units are tested as shipped by the manufacturer. However, DC fast chargers are typically configured in the field, not before they are shipped. Therefore, we recommend that the test method 1) specify how long the unit will wait before "powering down", if the operator can customize this setting; 2) require that screens display the typical "greeting" message; and 3) require that other settings are generally configured according to the manufacturer's recommendations before testing.

In addition, section 5.1(B)(2)(c) requires testing with one network channel active and prioritizes testing with Wi-Fi or Ethernet over cellular. We recommend listing cellular first in the DC-output EVSE test method because these units are typically installed in outdoor public locations without access to a permanent Wi-Fi or Ethernet connection.[1]

We also suggest consolidating the network activation requirements that are currently split between sections 5.1 and 6.5. In addition, we suggest clarifying that the definition of "standby-act, low mode" can be found in Consumer Electronics Association (CEA) 2037-A, Determination of Television Set Power 406 Consumption.

Measurement Accuracy: Section 5.1(H)(1) allows a much larger degree of measurement uncertainty, up to 2 percent at the 95 percent confidence level, than the power meter accuracy requirements in section 4 ("Accuracy: +/- 0.1% of reading PLUS +/- 0.1% of full scale."). We recommend explaining any factors that would justify lower accuracy requirements in 5.1(H)(1), and how inaccuracy caused by those other factors would be measured.

Section 6 Test Procedures for All Products

Vehicle States: PG&E, SDG&E, and SCE appreciate the addition of "Partial On" and "Idle" modes as recommended in our June 25, 2018 comments. We also agree with U.S. EPA's decision to list the corresponding J1772 vehicle states for each vehicle state that is described in sections 6.2, 6.3, and 6.4.

Duration: The draft test method notes in section 6.4 that additional power may be needed to cool charging cables after a charging event is completed. We recommend requiring measurement of power usage after current draw to the end load is completed until cooling is completed. Some potential criteria for when cooling is completed could be an observation that energy use has stabilized at a level similar to non-operational modes, or that a specified time has passed.

EVSE with integral batteries: The proposed test section 6.1(B) states that the test should be conducted with the batteries fully charged if they cannot be disconnected. If the battery cannot be isolated, then the test method should specify that:

1) The battery should be fully discharged to ensure that batteries do not provide stored energy to the EVSE during the test (since energy from the battery would not be captured by the test), or
2) The manufacturer could start and end the test with batteries fully charged if they are willing to accept any potential energy consumption that occurs when the batteries are discharged during the test and then recharged.

In the longer term, a future specification could potentially contain specific testing for use of energy storage to power DC-output EVSE if this type of unit becomes common in the market.

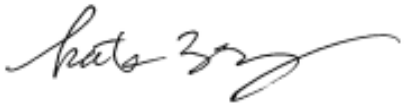
Lighting conditions: We recommend revising the test method for products with automatic brightness control. The current v1.0 test method requires testing under conditions representing dark and well-lit indoor environments, which may be common use cases for Level 2 chargers installed in parking garages. However, DC-output EVSE are typically installed outdoors in

[1] If the upcoming specification provides allowances for more than one network channel, then the unit should be tested with all network channels active.

California where ambient lighting levels may be one or two orders of magnitude higher than a well-lit indoor environment. We suggest revising the test method to require a brighter test environment, if feasible, or else requiring that the testing facility manually set the display to the brightest setting possible.

In conclusion, we wish to reiterate our support for U.S. EPA's efforts to expand the ENERGY STAR program for EVSE to include DC-output EVSE.

Sincerely,



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