

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



**OFFICE OF
AIR AND RADIATION**

May 24, 2018

Dear ENERGY STAR® Electric Vehicle Supply Equipment (EVSE) Brand Owner or Other Interested Party:

With this letter, the U.S. Environmental Protection Agency (EPA) proposes expanding the scope of the ENERGY STAR EVSE specification to include DC Output charging products. The current Version 1.0 EVSE specification excludes DC Output products and pertains only to AC-powered charging stations that are considered either Level 1, Level 2, or Dual-Input Level 1 and Level 2 EVSE.

When the Version 1.0 EVSE specification development process was launched in 2013, AC chargers provided the largest opportunity for energy savings due to their prevalence. Since that time, DC charging has evolved to provide shorter charge times that are more comparable to a stop at a gas station. Due to the potential for DC chargers to increase the range of EVs and the efforts to establish EV charging corridors for cross-country EV transportation, there has been an increase in demand for this product type. Adding DC charging stations to the ENERGY STAR scope will bring additional value to stakeholders.

In addition, there is a potential to differentiate these products by energy efficiency. Claimed efficiency ranges for DC EVSE on the market appear to be between 92% and 97% when the EVSE is actively charging at full output. On Mode testing on one DC EVSE conducted by Idaho National Laboratory found efficiency at 30–50 kW to range from 91–93%, and lower efficiencies at lower power levels¹. For another EVSE, the efficiency was 86–89%, including the transformer losses². DC EVSE requires more functions than AC EVSE (in addition to the primary function of providing power to an EV), such as heating and cooling the unit depending on external temperature, as well as liquid cooling of the charging cord. These functions can have a significant impact on the energy performance of the EVSE.

Given these considerations, EPA intends to include this product type in the scope of an ENERGY STAR EVSE Version 1.1 specification and is providing a discussion guide to engage stakeholders in shaping this amendment to the ENERGY STAR EVSE specification. EPA expects that this amendment will require close work with stakeholders including sharing multiple drafts and hosting stakeholder discussions.

Version 1.1 Discussion Guide Webinar

EPA will host a webinar to answer any questions on this discussion guide on **Monday, June 4, 2018 from 12:00 PM – 2:30 PM Eastern Time**. Please register [here](#) to attend. All work on this amendment, will be posted to the product development website at www.energystar.gov/revisedspecs and navigate to “Electric Vehicle Supply Equipment”.

Stakeholder Comments

Stakeholders are invited to submit written comments to evse@energystar.gov by **Monday, June 25, 2018**.

¹ Idaho National Laboratory, “DC Fast Charger Fact Sheet: ABB Terra 53 CJ charging a 2015 Nissan Leaf”, June 3, 2016, <https://avt.inl.gov/sites/default/files/pdf/evse/ABDCFCFactSheetJune2016.pdf>.

² U.S. Department of Energy, “Production EVSE Fact Sheet: DC Fast Charger: Hasetec”, <https://avt.inl.gov/sites/default/files/pdf/evse/DCFCHasetec.pdf>

Please contact me at (202) 564-8538 or Kwon.James@epa.gov, or Emmy Feldman at (202) 862-1145 or Emmy.Feldman@icf.com, if you have any questions on EVSE or if you would be willing to share any feedback on the proposal to include DC charging in a Version 1.1 specification.

Thank you for your continued support of ENERGY STAR.

Best Regards,

A handwritten signature in black ink, appearing to read "James Kwon". The signature is fluid and cursive, with the first name "James" and last name "Kwon" clearly distinguishable.

James Kwon, EPA Product Manager
ENERGY STAR for Consumer Electronics

Enclosures:

Version 1.1 ENERGY STAR Specification and Test Method Discussion Guide