

ENERGY STAR Version 1.1 EVSE Draft 1 Test Method Stakeholder Comment Summary and Response

Topic	Subtopic	Stakeholder Comment	EPA Response
General		<p>Three stakeholders supported the effort to develop a DC EVSE test method.</p> <p>Another stakeholder stated that DC EVSE are customized based on site and customer-specific factors. They also noted that the market for DC EVSE is emerging and products rated at 150 kW and above have been deployed in small numbers and their charging characteristics are not well understood. This commenter noted concern that funding opportunities may depend on ENERGY STAR certification, which could inhibit new, energy efficient technologies from coming to market.</p>	<p>EPA appreciates these stakeholder comments and concerns. In response, EPA has limited the scope of this effort to exclude DC-output EVSE with an output power greater than 350 kW.</p> <p>The goal for the ENERGY STAR DC EVSE test method is to work with stakeholders to determine an appropriate procedure for measuring the energy efficiency of DC EVSE. There is no industry test method to measure DC EVSE energy efficiency, so EPA hopes this will allow purchasers to be able to more easily compare products that are tested to the same procedure, and lead to the design of future generations of products for improved efficiency.</p> <p>ENERGY STAR is a voluntary program and certification is not mandatory. However, as the DC EVSE industry grows, EPA is hopeful that this effort will encourage energy efficiency to be one design criterion, while continuing to allow innovative product design. The ENERGY STAR program has been successful in achieving these goals for numerous product categories.</p>
Test Conduct	Powering Down	<p>A stakeholder suggested a change to the requirement that the EVSE be configured as-shipped because they are typically configured in the field. They recommended that EPA specify how long an EVSE will wait before powering down if this is a customizable setting</p>	<p>Since power shall be measured according to IEC 62301 Ed 2.0-2011, there is no concern that customizable EVSE could shift out of the mode being tested and into a lower power state. The guidance in the IEC standard will prevent this possibility.</p>
Test Conduct	Full Network Connectivity	<p>A stakeholder recommended combining the network activation requirements from the Test Conduct section with the Full Network Connectivity Testing from the Test Procedures section of the test method.</p>	<p>EPA continues to keep the two sets of requirements separate, as one is a test condition, while the other is a measurement of the UUT's response under those conditions.</p>
Test Conduct	Phone Display Testing	<p>One stakeholder noted that some DC EVSE are controlled via a phone application and the EVSE does not have a display. For those products, EPA should not require display testing.</p>	<p>EPA is not proposing to test any external devices, such as phones, that are not shipped with the EVSE.</p>
Test Procedure	Standby	<p>One stakeholder supported the addition of Partial On and Idle Mode tests for DC EVSE. Another stakeholder noted that the referenced IEC 62301 test procedure to measure standby power will not be applicable for off-grid DC EVSE. Since off-grid EVSE are self-contained and generate their own power, they do not require power from the grid and their standby power (to power electronics, charge an internal battery, provide nighttime lighting, etc.) should not be counted against efficiency during charging.</p>	<p>EPA proposes to maintain Partial On and Idle Mode tests for DC EVSE. While these off-grid, DC-input EVSE are likely to be powered from solar PV sources, customers may still benefit from knowing the power draw in various modes of operation as it may draw down their storage or impact other PV-connected loads.</p>

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Testing and Certification		<p>A stakeholder suggested that EPA allow self-testing/self-certification at manufacturer in-house testing facilities in order to minimize disruption to product development and because DC EVSE are normally custom-engineered, large, and complex systems that cannot easily be shipped without burdens associated with time, cost, and logistics.</p>	<p>To ensure consumer confidence in the ENERGY STAR label and to protect the investment of ENERGY STAR partners, EPA requires all ENERGY STAR products to be third-party certified. All products must be tested in an EPA-recognized laboratory and reviewed by an EPA-recognized certification body before they can carry the label.</p> <p>However, EPA understands these stakeholder concerns, which are common for larger ENERGY STAR product categories, like Commercial Food Service products and Data Center products. EPA provides recognition to laboratories that are either accredited to ISO/IEC 17025 by an EPA-recognized accreditation body (AB) or participate in a CB's witnessed or supervised manufacturers' testing laboratory (W/SMTL) program for the relevant ENERGY STAR test methods. For large product types, such as DC EVSE, a witnessed or supervised test in an accredited manufacturer laboratory is a popular choice for ENERGY STAR certification to cause minimal burden and disruption to product development.</p> <p>EPA is also hoping that testing for ENERGY STAR can be integrated into safety testing that is already being conducted for new products.</p>
Timeline		<p>Two stakeholders requested that EPA extend the timeline of the development of the Version 1.1 test method and specification. They cited the following reasons:</p> <ul style="list-style-type: none"> • DC EVSE market is rapidly evolving, with 50 kW chargers being well-established but higher-power stations being new to the market • These products are complex and have a wide variety of use-cases • To allow for important stakeholder involvement, including EVSE manufacturers, network owners and operators, and EV manufacturers. Dialogue with all these parties will ensure future innovations are not excluded from the specification or that one technology is favored over another • Most EVSE suppliers have limited resources to focus on an additional certification because the industry is changing rapidly 	<p>As EPA develops the test method to measure efficiency and subsequent specification to recognize products that are achieving energy efficiency, all stakeholder feedback is welcomed. If stakeholders have specific recommendations on how to improve the test method, the ENERGY STAR Guiding Principles ensure that EPA will resolve any technical issues before proceeding. The main goal for this test method development effort is to develop an appropriate, repeatable, and accurate method to measure energy efficiency of DC-output EVSE. EPA looks forward to continuing to address technical concerns, with input from stakeholders, during this process.</p>