# ENERGY STAR® Program Requirements for Electric Vehicle Supply Equipment

## Eligibility Criteria
## Version 1.0
## Rev. Apr-2017

Following is the Version 1.0 ENERGY STAR product specification for Electric Vehicle Supply Equipment. A product shall meet all of the identified criteria if it is to earn the ENERGY STAR.

# 1 DEFINITIONS

A) Electric Vehicle Supply Equipment (EVSE): The conductors, including the ungrounded, grounded, and equipment grounding conductors, the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatuses installed specifically for the purpose of delivering energy from the premises wiring to the electric vehicle. Charging cords with NEMA 5-15P and NEMA 5-20P attachment plugs are considered EVSEs. Excludes conductors, connectors, and fittings that are part of the vehicle.[1]

1) Level 1: A galvanically-connected EVSE with a single-phase input voltage nominally 120 volts ac and maximum output current less than or equal to 16 amperes ac.[2]

2) Level 2: A galvanically-connected EVSE with a single-phase input voltage range from 208 to 240 volts ac and maximum output current less than or equal to 80 amperes ac.[2]

3) Fast dc: A galvanically-connected EVSE that includes an off-board charger and provides dc current greater than or equal to 80 amperes dc.

4) Wireless / Inductive: A non-galvanically-connected EVSE.

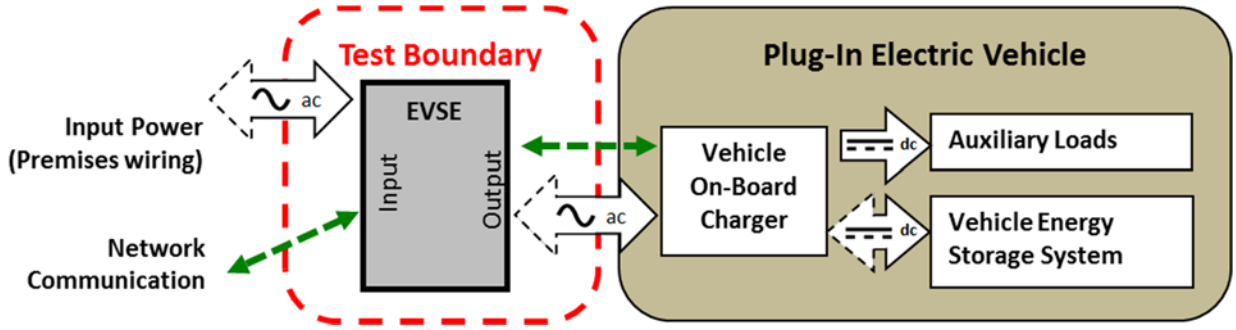



**Figure 1: Schematic of Overall Plug-In Vehicle Charging System Detailing EVSE Test Boundary**

B) EVSE Functions:

1) Primary Function: Providing current to a connected load.

2) Secondary Function: Function that enables, supplements or enhances a primary function. For EVSE, examples of Secondary Functions are:

[1] SAE J2894-1 Section 3.10.
[2] This definition is intended to be consistent with the requirements in SAE J1772, with some additional clarifications.

a) Automatic Brightness Control (ABC): The self-acting mechanism that controls the brightness of a display or lamp as a function of ambient light.

b) Full Network Connectivity: The ability of the EVSE to maintain network presence while in Partial On Mode.

Note: Presence of the EVSE's network services, its applications, and possibly its display is maintained even if some components of the EVSE are powered down. The EVSE can elect to change power states based on receipt of network data from remote network devices, but should otherwise stay in a low power mode absent a demand for services from a remote network device.

c) Occupancy Sensing: detection of human or object presence in front of or in the area surrounding an EVSE.

d) Communicating with the vehicle;

e) Illumination of display, indicator lights, or ambient lighting;

f) Public access control (RFID card, authorization, etc.);

g) Control Pilot Signal; and

h) Wake-up function.

3) Tertiary Function: Function other than a primary or a secondary function.

Example: An EMC filter and status indication provides their function in No Vehicle Mode, Partial On Mode, and On Mode.

C) EVSE Operational Modes and Power States:

Note: The transition period to a different mode; whether automatically initiated, or via user action; does not constitute a mode.

1) Disconnected: Condition of the equipment during which all connections to power sources supplying the equipment are removed or galvanically isolated and no functions depending on those power sources are provided. The term power source includes power sources external and internal to the equipment.

2) No Vehicle Mode: Condition during which the equipment is connected to external power and the product is physically disconnected from vehicle (mode can only be entered or exited through manual intervention). No Vehicle Mode is intended to be the lowest-power mode of the EVSE.

Note: The vehicle-EVSE interface is in State A of SAE J1772, where the vehicle is not connected.[3]

3) On Mode: Condition during which the equipment provides the primary function or can promptly provide the primary function.

a) Operation Mode: Condition during which the equipment is performing the primary function.

Note: The vehicle-EVSE interface is in State C, where the vehicle is connected and accepting energy.[3]

b) Idle Mode: Condition during which the equipment can promptly provide the primary function but is not doing so.

Note: Idle Mode is the condition within On Mode where the EVSE is connected to the vehicle or vehicle simulator but is not actively providing current. The vehicle-EVSE interface is in State C, where the vehicle is connected and ready to accept energy.[3]

[3] This mode is intended to be associated with a vehicle/EVSE interface state (e.g., A, B, or C) as defined in SAE J1772.

4) Partial On Mode: Condition during which the equipment provides at least one secondary function but no primary function.

Note: The vehicle-EVSE interface is in State B1 or B2, where the vehicle is connected but not ready to accept energy and the EVSE is or is not ready to supply energy.[3]

**Table 1: Operational Modes and Power States**

| Operational Modes | Most closely related Interface State as Defined in SAE J1772 | Further Description |
|---|---|---|
| No Vehicle Mode | State A | No Vehicle Mode is associated with State A, or where the EVSE is not connected to the EV. The EVSE is connected to external power. |
| Partial On Mode | State B1 or State B2 | Partial On Mode is associated with State B1 or State B2 where the vehicle is connected but is not ready to accept energy. Sub-state B1 is where the EVSE **is not** ready to supply energy and sub-state B2 **is** where the EVSE is ready to supply energy. |
| On Mode | | |
| Idle Mode | State C | Idle Mode is associated with State C, where the vehicle is connected and ready to accept energy and the EVSE is capable of promptly providing current to the EV but is not doing so. |
| Operation Mode | State C | Operation Mode is associated with State C, where the EVSE is providing the primary function, or providing current to a connected load (i.e., the relay is closed and the vehicle is not drawing current). |

5) Power Management: Automatic control mechanism that achieves the lowest power consistent with a pre-determined level of functionality.

D) Other:

1) Apparent power (S): The product of RMS voltage and RMS current, which is equal to magnitude of the complex power, and measured in volt-amperes (VA).

2) Average Power (P) (also Real Power): The power in a circuit which is transformed from electric to non-electric energy and is measured in watts (W). For a two-terminal device with instantaneous current and voltage waveforms i(t) and v(t) which are periodic with period T, the real or average power P is[4]:

[4] Average power is intended to align with the definition of real power in SAE J2894.

$$P = \frac{1}{T}\int_{0}^{T} v(t)i(t)dt$$

3) Duty Cycle: The ratio or a given time interval of the uninterrupted duration at the high logic state to the total time.

   Note: This duty cycle, lying between 0 and 1, may be expressed as a percentage.

4) Power Factor (PF): The ratio of the average power (P) in watts to the apparent power (S) in volt-amperes.

$$PF = \frac{P}{S}$$

5) Unit Under Test (UUT): The specific sample of a representative model undergoing measurement which includes the base product and any accessories packaged with it.

6) Illuminance: The luminous flux per unit area of light illuminating a given surface, expressed in units of lux (lx).

7) Luminance: The photometric measure of the luminous intensity per unit area of light travelling in a given direction, expressed in candelas per square meter ($cd/m^2$).

8) High Resolution Display: A screen device that converts a video signal into a visual output and is capable of displaying a minimum of 480x234 native resolution and has a backlight (e.g., LCD panel, OLED panel).

E) Product Family: A group of product models that are (1) made by the same manufacturer, (2) subject to the same ENERGY STAR certification criteria, and (3) of a common basic design. Product models within a family differ from each other according to one or more characteristics or features that either (1) have no impact on product performance with regard to ENERGY STAR certification criteria, or (2) are specified herein as acceptable variations within a Product Family. For EVSE, acceptable variations within a Product Family include:

   1) Color,

   2) Output cable, and

   3) Housing.

F) Connected Functionality Definitions

   1) Communication Link: The mechanism for bi-directional data transfers between the EVSE and one or more external applications, devices or systems.

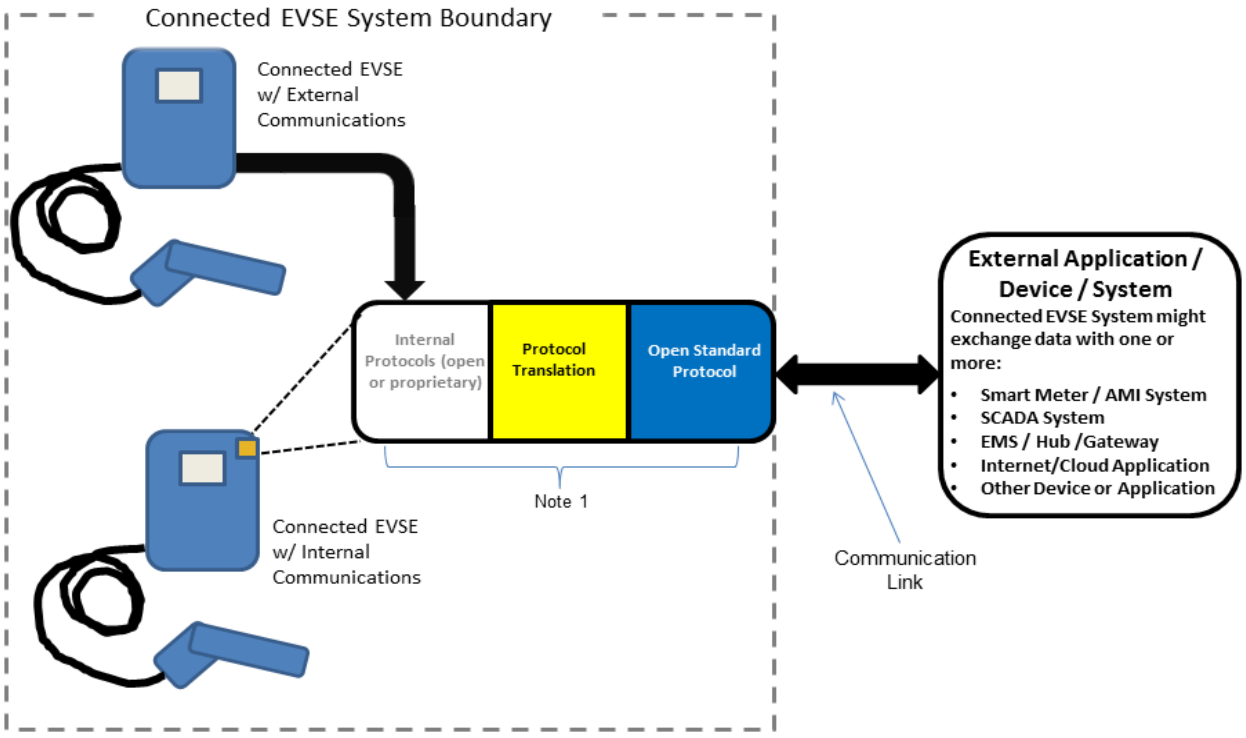
   2) Demand Response (DR): Changes in electric usage by demand-side resources from their normal consumption patterns in response to changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized[5].

   3) Demand Response Management System (DRMS): The system operated by a program administrator, such as the utility or third party, which dispatches signals with DR instructions and/or price signals to the ENERGY STAR EVSE and receives messages from the EVSE.

   4) EVSE System: As shown in Figure 2, it includes the ENERGY STAR certified EVSE, integrated or separate communications hardware, and additional hardware and software required to enable connected functionality.

   5) Load Management Entity: DRMS, home energy management system, etc.

[5] Federal Energy Regulatory Commission, https://www.ferc.gov/industries/electric/indus-act/demand-response/dr-potential.asp




Note**:** Communication device(s), link(s) and/or processing that enables Open Standards-based communication between the EVSE and external application / device / system(s). These elements, either individually or together, could be within the EVSE, and/or an external communication module, a hub/gateway, or in the Internet/cloud.

**Figure 2: Connected EVSE System**

G) Open Standards: Standards that are:

1) Included in the Smart Grid Interoperability Panel (SGIP) Catalog of Standards,[6] and/or
2) Included in the National Institute of Standards and Technology (NIST) Smart Grid framework Tables 4.1 and 4.2,[7] and/or
3) Adopted by the American National Standards Institute (ANSI) or another well-established international standards organization such as the International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), International Telecommunication Union (ITU), Institute of Electrical and Electronics Engineers (IEEE), or Internet Engineering Task Force (IETF).

H) **Acronyms:**

1) A: Ampere
2) ABC: Automatic Brightness Control
3) ac: Alternating Current
4) dc: Direct Current
5) DOE: U.S. Department of Energy

[6] http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/PMO#Catalog_of_Standards_Processes

[7] http://www.nist.gov/smartgrid/upload/NIST_Framework_Release_2-0_corr.pdf

6) DR: Demand Response
7) EPA: Environmental Protection Agency
8) EVSE: Electric Vehicle Supply Equipment
9) IEC: International Electrotechnical Commission
10) IEEE: Institute of Electrical and Electronics Engineers
11) NEMA: National Electrical Manufacturers Association
12) SAE: Society of Automotive Engineers
13) UUT: Unit Under Test
14) V: Volt
15) W: Watt

# 2 SCOPE

## 2.1 Included Products

2.1.1 Products that meet the definition for EVSE as specified herein are eligible for ENERGY STAR certification, with the exception of products listed in Section 2.2. In addition, eligible EVSE shall fall into one of the following categories:

i. Level 1 EVSE.

ii. Level 2 EVSE.

iii. Dual Input Level 1 and Level 2 EVSE.

## 2.2 Excluded Products

2.2.1 Products that are covered under other ENERGY STAR product specifications are not eligible for certification under this specification. The list of specifications currently in effect can be found at www.energystar.gov/specifications.

2.2.2 The following products are not eligible for certification under this specification:

i. Dc Output EVSE.

ii. Wireless/Inductive EVSE.

iii. Power electronic components inside the vehicle.

# 3 CERTIFICATION CRITERIA

## 3.1 Significant Digits and Rounding

3.1.1 All calculations shall be carried out with actual measured (unrounded) values. Only the final result of a calculation shall be rounded.

3.1.2 Unless otherwise specified within this specification, compliance with specification limits shall be evaluated using exact values without any benefit from rounding.

3.1.3 Directly measured or calculated values that are submitted for reporting on the ENERGY STAR website shall be rounded to the nearest significant digit as expressed in the corresponding specification limit.

## 3.2 General Requirements

3.2.1 Each EVSE submitted for ENERGY STAR certification shall be Listed by a Nationally Recognized Testing Laboratory (NRTL) for safety.

3.2.2 Dual Input Level 1 and Level 2 EVSE shall meet all requirements and report information in both configurations.

## 3.3 No Vehicle Mode Requirements

Note: These requirements refer to the SAE J1772 State A.

3.3.1 Measured No Vehicle Mode power ($P_{NO\_VEHICLE}$) shall be less than or equal to the Maximum No Vehicle Mode Power Requirement ($P_{NO\_VEHICLE\_MAX}$), as calculated per Equation 1, subject to the following requirements.

i. For products with ABC enabled by default, the average No Vehicle Mode power in high and low illuminance conditions shall be used in place of $P_{NO\_VEHICLE}$, above.

ii. For products capable of network connection with multiple protocols (e.g., Wi-Fi and Cellular), only the allowance for the protocol enabled during testing shall be claimed.

**Equation 1: Calculation of Maximum No Vehicle Mode Power Requirement**

$$P_{NO\_VEHICLE\_MAX} = 2.6 + P_{WAKE} + P_{DISPLAY}$$

*Where*:

- $P_{NO\_VEHICLE\_MAX}$ *is the Maximum No Vehicle Mode Power Requirement;*
- $P_{WAKE}$ *is the No Vehicle Mode power allowance for the network connection with wake capability enabled during testing listed in Table 2; and*
- $P_{DISPLAY}$ *is the No Vehicle Mode power allowance for a High Resolution Display enabled during testing listed in Table 2.*

**Table 2: No Vehicle Mode Power Allowances**

| Product Function | No Vehicle Mode Power Allowance (watts, rounded to the nearest 0.1 W for reporting) |
|---|---|
| In-use Wi-Fi or Ethernet Interface with Wake Capability *($P_{WAKE}$)* | $\frac{1.0}{n}$, *Where:* • *n* is the number of outputs. |
| In-use Cellular with Wake Capability *($P_{WAKE}$)* | $\frac{2.0}{n}$, *Where:* • *n* is the number of outputs. |
| Other In-use LAN (Local Area Network) Interface with Wake Capability *($P_{WAKE}$)* | $\frac{1.0}{n}$, *Where:* • *n* is the number of outputs. |
| In-use High Resolution Display (*$P_{DISPLAY}$*) | $[(4.0 \times 10^{-5} \times \ell \times A) + 119 \times \tanh(0.0008 \times [A - 200.0] + 0.11) + 6.0]/n$ *Where:* • *A* is the Screen Area in square inches; • *ℓ* is the Maximum Measured Luminance of the Display in candelas per square meter, as measured in Section 4) C) of the ENERGY STAR Test Method for Determining Electric Vehicle Supply Equipment Energy; • *tanh* is the hyperbolic tangent function; and • *n* is the number of outputs. **Example**: For a single-output EVSE with a maximum measured luminance of 300 candelas/m$^2$ and a 5×5 inch screen, the allowance for the in-use display would be 2.7 watts. |

## 3.4 Partial On Mode Requirements

Note: These requirements refer to the SAE J1772 State B1 or State B2.

3.4.1 Measured Partial On Mode power ($P_{PARTIAL\_ON}$) shall be less than or equal to the Maximum Partial On Mode Power Requirement ($P_{PARTIAL\_ON\_MAX}$), as calculated per Equation 2, subject to the following requirements.

i. For products with ABC enabled by default, the average Partial On Mode power in high and low illuminance conditions shall be used in place of $P_{PARTIAL\_ON}$, above.

ii. For products capable of network connection with multiple protocols (e.g., Wi-Fi and Cellular), only the allowance for the protocol enabled during testing shall be claimed.

**Equation 2: Calculation of Maximum Partial On Mode Power Requirement**

$$P_{PARTIAL\_ON\_MAX} = 2.6 + P_{WAKE} + P_{DISPLAY}$$

*Where*:

- $P_{PARTIAL\_ON\_MAX}$ *is the Maximum Partial On Mode Power Requirement;*
- $P_{WAKE}$ *is the Partial On Mode power allowance for the network connection with wake capability enabled during testing listed in Table 3; and*
- $P_{DISPLAY}$ *is the Partial On Mode power allowance for a High Resolution Display enabled during testing listed in Table 3.*

**Table 3: Partial On Mode Power Allowances**

| Product Function | Partial On Mode Power Allowance (watts, rounded to the nearest 0.1 W for reporting) |
|---|---|
| In-use Wi-Fi or Ethernet Interface with Wake Capability *($P_{WAKE}$)* | $\frac{1.0}{n}$, *Where:* • *n* is the number of outputs. |
| In-use Cellular with Wake Capability *($P_{WAKE}$)* | $\frac{2.0}{n}$, *Where:* • *n* is the number of outputs. |
| Other In-use LAN (Local Area Network) Interface with Wake Capability *($P_{WAKE}$)* | $\frac{1.0}{n}$, *Where:* • *n* is the number of outputs. |
| In-use High Resolution Display ($P_{DISPLAY}$) | $[(4.0 \times 10^{-5} \times \ell \times A) + 119 \times \tanh(0.0008 \times [A - 200.0] + 0.11) + 6.0]/n$ *Where:* • *A* is the Screen Area in square inches; • $\ell$ is the Maximum Measured Luminance of the Display in candelas per square meter, as measured in Section 4) C) of the ENERGY STAR Test Method for Determining Electric Vehicle Supply Equipment Energy; • *tanh* is the hyperbolic tangent function; and • *n* is the number of outputs. **Example**: For a single-output EVSE with a maximum measured luminance of 300 candelas/m$^2$ and a 5×5 inch screen, the allowance for the in-use display would be 2.7 watts. |

## 3.5 Idle Mode Requirements

Note: These requirements refer to the SAE J1772 State C.

3.5.1 Measured Idle Mode power ($P_{IDLE}$), shall be less than or equal to the Maximum Idle Mode Power Requirement ($P_{IDLE\_MAX}$), as calculated per Equation 3, subject to the following requirements.

i. For products with ABC enabled by default, the average Idle Mode power in high and low illuminance conditions shall be used in place of $P_{IDLE}$, above.

ii. For products capable of network connection with multiple protocols (e.g., Wi-Fi and Cellular), only the allowance for the protocol enabled during testing shall be claimed.

**Equation 3: Calculation of Maximum Idle Mode Power Requirement**

$$P_{IDLE\_MAX} = (0.4 \times Max\ Current) + 2.6 + P_{WAKE} + P_{DISPLAY}$$

*Where*:

- $P_{IDLE\_MAX}$ *is the Maximum Idle Mode Power Requirement, in watts;*
- *Max Current is the Nameplate Maximum Output Current, in amperes;*
- $P_{WAKE}$ *is the Idle Mode power allowance for the network connection with wake capability enabled during testing listed in Table 4; and*
- $P_{DISPLAY}$ *is the Idle Mode power allowance for a High Resolution Display enabled during testing listed in Table 4.*

**Table 4: Idle Mode Power Allowances**

| Product Function | Idle Mode Power Allowance (watts, rounded to the nearest 0.1 W for reporting) |
|---|---|
| In-use Wi-Fi or Ethernet Interface with Wake Capability *($P_{WAKE}$)* | $\frac{1.0}{n}$, *Where:* • *n* is the number of outputs. |
| In-use Cellular with Wake Capability *($P_{WAKE}$)* | $\frac{2.0}{n}$, *Where:* • *n* is the number of outputs. |
| Other In-use LAN (Local Area Network) Interface with Wake Capability *($P_{WAKE}$)* | $\frac{1.0}{n}$, *Where:* • *n* is the number of outputs. |
| In-use High Resolution Display ($P_{DISPLAY}$) | $[(4.0 \times 10^{-5} \times \ell \times A) + 119 \times \tanh(0.0008 \times [A - 200.0] + 0.11) + 6.0]/_n$ *Where:* • *A* is the Screen Area in square inches; • $\ell$ is the Maximum Measured Luminance of the Display in candelas per square meter, as measured in Section 4) C) of the ENERGY STAR Test Method for Determining Electric Vehicle Supply Equipment Energy; • *tanh* is the hyperbolic tangent function; and • *n* is the number of outputs. **Example**: For a single-output EVSE with a maximum measured luminance of 300 candelas/m$^2$ and a 5×5 inch screen, the allowance for the in-use display would be 2.7 watts. |

## 3.6 Connected Functionality

This section includes connected criteria for ENERGY STAR certified EVSE. EVSE that meet the connected functionality criteria shall be capable of supporting Demand Response (DR) (e.g., via software updates or integration with an external service). Compliance with this section is optional. ENERGY STAR certified EVSE that comply with all connected criteria will be identified on the ENERGY STAR website as having 'Connected' functionality.

Note**:** EPA recommends that once DR capability is added, that the EVSE be capable of directly or indirectly supporting both signals-based DR as well as price response. As appropriate, EPA further encourages connected functionality that enables direct control by the Load Management Authority as well as integration with commercial EVSE management applications and/or energy management systems.

Brand owners are encouraged to engage with utilities to ensure DR capabilities align with utility needs and DR program designs.

3.6.1 Grid Communications: The product shall include a communication link that is capable of supporting DR. This link shall use open standards, as defined in this specification, for all communication layers.

i. Products that include a communication link that uses Open Charge Point Protocol (OCPP) also comply with this criterion.

Note: Effective November 24, 2015 OCPP is being developed by OASIS as the Standard Development Organization with a goal of integrating OCPP with the International Electrotechnical Commission (IEC) framework[8]. EPA is proposing to include OCPP since it is widely used and is in the process of being established as an open standard.

3.6.2 Open Access: To enable interconnection with the product over the communication link, an interface specification, application programming interface (API) or similar documentation that is intended to enable DR functionality shall be made readily available.

Note: Products that enable direct, on-premises, open-standards based interconnection are preferred, but alternative approaches, where open-standards connectivity is enabled only with use of off-premise services, are also acceptable.

3.6.3 Consumer Override: The product shall be capable of supporting DR event override-ability by consumers.

3.6.4 Capabilities Summary: A ≤4000 character (approximately 500 words or less) summary description of the EVSE system's and/or associated Service Provider's DR capabilities/services shall be submitted.

1. In this summary, the following shall be included:
   i. DR Support, e.g., implemented, planned for CY2017.
   ii. For products that do not ship with DR capabilities enabled, the steps needed to enable these capabilities.
2. In this summary, EPA recommends noting the following, as applicable:
   iii. DR services that the product has the capability to participate in such as load dispatch, ancillary services (including V2G), price notification and price response.
   iv. Whether the EVSE can be directly addressed via the interface specification, API or similar documentation.
   v. Support for locational DR, e.g., to ZIP code(s), feeder(s), or to EVSE endpoints specified by the Load Management Entity.
   vi. List open communications supported by the EVSE, including applicable certifications.
   vii. Feedback to Load Management Entity, e.g., verification/M&V, override notification.
   viii. Response configurability/flexibility by the consumer and/or Load Management Entity.
   ix. Measures to limit consumer impacts, if any.

# 4 TESTING

## 4.1 Test Methods

[8] http://www.openchargealliance.org/news/announcement/

4.1.1 Test methods identified in Table 5 shall be used to determine certification for ENERGY STAR.

**Table 5: Test Methods for ENERGY STAR Certification**

| Product Type | Test Method |
|---|---|
| All Electric Vehicle Supply Equipment | ENERGY STAR Electric Vehicle Supply Equipment Test Method (Rev. Apr-2017) |
| Electric Vehicle Supply Equipment with Display | ENERGY STAR Displays Test Method (Rev. Sep-2015) |
| Electric Vehicle Supply Equipment with Full Network Connectivity | Section 6.7.5.2 of Consumer Electronics Association (CEA) 2037-A, Determination of Television Set Power Consumption |

### 4.2 Number of Units Required for Testing

4.2.1 Representative Models shall be selected for testing per the following requirements:

i. For certification of an individual product model, the Representative Model shall be equivalent to that which is intended to be marketed and labeled as ENERGY STAR.

ii. For certification of a Product Family, the highest energy using model within that Product Family can be tested and serve as the Representative Model. Any subsequent testing failures (e.g., as part of verification testing) of any model in the family will have implications for all models in the family.

4.2.2 A single unit of each Representative Model shall be selected for testing.

### 4.3 International Market Certification

4.3.1 Products shall be tested for certification at the relevant input voltage/frequency combination for each market in which they will be sold and promoted as ENERGY STAR.

## 5 EFFECTIVE DATE

5.1.1 Effective Date: The Version 1.0 ENERGY STAR Electric Vehicle Supply Equipment specification shall take effect December 27, 2016. To certify for ENERGY STAR, a product model shall meet the ENERGY STAR specification in effect on the model's date of manufacture. The date of manufacture is specific to each unit and is the date on which a unit is considered to be completely assembled.

5.1.2 Future Specification Revisions: EPA reserves the right to change this specification should technological and/or market changes affect its usefulness to consumers, industry, or the environment. In keeping with current policy, revisions to the specification are arrived at through stakeholder discussions. In the event of a specification revision, please note that the ENERGY STAR certification is not automatically granted for the life of a product model. Considerations for future revisions include:

i. EPA will continue to monitor the market for dc fast, dc slow, and wireless EVSE, and evaluate the opportunity to differentiate such products based on energy performance. Should the potential for significant energy savings exist among these products, EPA will consider expanding the scope of this EVSE specification to include them in a future revision.

ii. EPA will assess the power draw associated with different network protocols to determine if it may be necessary to test all connections in the future. In addition, EPA will consider how to appropriately encourage the powering down of certain features (e.g., network connectivity, in-use display) to a lower power state when there is no user activity.

iii. EPA will monitor and assess if a Typical Energy Consumption approach is more appropriate for EVSE than a modal power approach in the future. In order to do so, EPA will need to gather data on the duty cycle, or common usage profile, for Level 1 and Level 2 EVSE by application.

iv. EPA will consider amending the test method for models with ABC enabled by default to require illuminance conditions greater than 300 lux that would better represent typical outdoor conditions.