

Hardware Listing Criteria

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Introduction

The EVCAN Charger List identifies EV chargers that are both ENERGY STAR certified and OCPP 2.0.1 Core certified by the Open Charge Alliance (OCA). Utilities, municipalities, and program administrators can use the list as a single, defensible reference for program eligibility, rebates, and procurement, without reviewing manufacturer claims one product at a time.

How Products are Listed

To be listed by EVCAN, a product must:

1. Be AC Level 2 or DC electric vehicle supply equipment (EVSE).
2. Be ENERGY STAR certified.
3. Hold OCPP 2.0.1 Core certification from the OCA.

EVCAN does not test products or accept applications. It compares the ENERGY STAR lists of certified AC and DC EVSE with the OCA list of certified products and lists a product only when both sources identify it. ENERGY STAR certification requires the product to be listed for safety by a nationally recognized testing laboratory (NRTL).

Why Highlight These Certifications?

Energy use is on the rise, and utilities need to curb unnecessary draws on the grid, including from chargers that sit idle with no vehicle connected. ENERGY STAR certification addresses this with laboratory-measured power consumption and a required NRTL safety listing. Its limits on idle and no-vehicle power, along with DC efficiency requirements, reduce waste across an installed fleet.

Customers are also poorly served when hardware and software are incompatible or locked to a single provider. OCPP 2.0.1 Core certification confirms interoperability through laboratory conformance testing. Because OCPP is an open standard designed for forward compatibility, operators can change networks with less effort, which supports longer charger service life. Version 2.0.1 also adds expanded smart charging, and support for communication between the EV and charger. Together, these certifications provide third-party verified assurance on energy performance, safety, and interoperability.

Getting Listed

There is no application for the EVCAN Charger List. EVCAN adds a product when it holds both certifications and EVCAN matches the two records as described. For more information, see Source Lists and Screening Methods below.

- ENERGY STAR: More information on how to get your product certified through the ENERGY STAR program can be found here.
- OCPP 2.0.1 Core: More information on how to get your product certified through the Open Charge Alliance can be found here.

To help EVCAN match your records, use the same brand, product name, and model numbers in both certifications. If the names differ, a product page on your website that lists both can help.

EVCAN updates the list quarterly. If you believe a product is missing or listed incorrectly, email hello@evcan.org with the ENERGY STAR Unique ID and the OCA certificate number.

Definitions and Acronyms

This section defines the terms and abbreviations used in this specification. Where the ENERGY STAR EVSE specification, the OCA, or the EVCAN CSMS specification defines a term, the definition follows theirs.

Definitions

Term	Definition
Certification body	A third party recognized by EPA that certifies products to ENERGY STAR requirements and reports the result to EPA.
Charge station management system (CSMS)	A system that manages and controls one or more EVSEs, enabling real-time monitoring, remote configuration, and energy management. It can have the ability to control the amount of power exchanged between EVSE and an EV, to optimize grid interaction through load management and integration with local energy resources, to support efficient and reliable charging operations. Also known as Charge Management System (CMS), Electric Vehicle Energy Management System (EVEMS), and Charge Point Management System (CPMS).
Demand response	Changes in electric use from normal patterns in response to changes in the price of electricity or to incentive payments, or when system reliability is at risk.
Electric vehicle supply equipment (EVSE)	The part of a charging station that delivers electrical energy to an electric vehicle. An EVSE may have one or more connectors to accommodate different vehicles but can only be used to charge one vehicle at a time. Also known as Charging Point / Charging Position
ENERGY STAR Partner	An organization that signed a Partnership Agreement with EPA to manufacture or private label ENERGY STAR certified products.
ENERGY STAR Unique ID	A seven-digit number EPA assigns to an ENERGY STAR model, or set of models, with unique performance characteristics. It is unique to the model and the specification version.
Interoperability	The ability of different hardware and software to work together safely and reliably, acting on communicated information without significant customization or manual intervention, as the EVCAN CSMS specification defines it.
OCA certificate	The certificate the OCA issues when a charging station passes OCPP certification testing. It names the certificate holder, product designation, tested firmware version, test laboratory, certification date, and results by profile.
OCPP profile	A group of OCPP functions that an independent laboratory tests together and the OCA certificate reports with a result such as Pass or Not Tested.

Term	Definition
	Core is the base profile and covers booting, authorization, configuration, transactions, remote control, and basic security (Transport Layer Security (TLS) with server certificates). **Advanced Security** adds TLS with client certificates, for mutual authentication. **Smart Charging** covers OCPP smart charging, whereby the CSMS sends charging profiles and limits to the EVSE, using OCPP. This functionality complements the ISO 15118 support profile below. **ISO 15118 Support** covers ISO 15118 smart charging and Plug and Charge authorization, whereby the EVSE and EV negotiate charging schedules.
Product Designation	The product name that an OCA certificate identifies names. The certificate applies only to that designation.
Product family	A group of models from one manufacturer with a common basic design that differ only in characteristics that do not affect certification, such as color, output cable, housing, or firmware updates.
Qualified Products List (QPL)	The EVCAN list of products that meet the criteria in an EVCAN technical specification.
Reported information	Information the list displays that a product does not need to meet to be listed.
Required criterion	A criterion a product must meet to be listed.
Screening record	EVCAN's record of each match: the ENERGY STAR ID, the OCA certificate number, and the manufacturer webpage used, if any.

Acronyms and Abbreviations

Acronym	Meaning
AC	Alternating current
ADA	Americans with Disabilities Act
CCS	Combined Charging System, a DC fast charging connector
CHAdeMO	A DC fast charging connector and protocol
CSMS	Charge station management system
DC	Direct current
EPA	U.S. Environmental Protection Agency
EV	Electric vehicle
EVSE	Electric vehicle supply equipment
FCC	Federal Communications Commission
ISO	International Organization for Standardization
J1772	SAE J1772, the conductive charge coupler standard for plug-in electric vehicles
J3400	SAE J3400, the standard for the North American Charging Standard (NACS) connector
NACS	North American Charging Standard
NRTL	Nationally recognized testing laboratory, a laboratory recognized by the U.S. Occupational Safety and Health Administration to test and list products for safety
OCA	Open Charge Alliance

Acronym	Meaning
OCPP	Open Charge Point Protocol
QPL	Qualified product list
RF	Radio frequency
SAE	SAE International
TLS	Transport Layer Security
UL	Underwriters Laboratories

Scope of Listing Criteria

Background on Certification Bodies

ENERGY STAR: The U.S. Environmental Protection Agency's voluntary certification program for energy efficient products. An EVSE is tested in a laboratory recognized by EPA and certified by a certification body recognized by EPA before it can carry the mark. The Version 1.2 specification covers Level 1 and Level 2 AC equipment, and DC-output equipment up to 350 kW. It requires:

- Listing for safety by a nationally recognized testing laboratory (NRTL)
- Power limits for No Vehicle, Partial On, and Idle modes on AC equipment, and for No Vehicle and Partial On modes on DC equipment
- For DC equipment up to 65 kW, a minimum average efficiency of 0.93, weighted across four loading conditions and three ambient temperatures
- Continued compliance of every certified configuration through later firmware and software changes

A manufacturer can certify a product family by testing its highest energy-using model. Every model in the family must meet the requirements.

Open Charge Alliance (OCA): The Open Charge Point Protocol (OCPP) is an open standard for communication between a charging station and a charge station management system (CSMS), maintained by the OCA. OCPP certification means a test laboratory evaluated the charging station's conformance to the protocol and the OCA issued a certificate.

Core is the base profile for certification. It covers booting, authorization, configuration, transactions, remote control, and basic security. The same certificate reports optional profiles separately: Advanced Security, Local Authorization List Management, Smart Charging, Advanced Device Management, Reservation, Advanced User Interface, and ISO 15118 Support. The Core profile certificate names the certificate holder, the product designation, the tested firmware version, the test laboratory, and the certification date.

Equipment Covered

The definitions below follow the ENERGY STAR EVSE specification, Version 1.2.

- AC Level 2 EVSE: equipment with a galvanic connection to the vehicle, a single-phase input of 208 to 240 V AC, and a maximum output current of 80 A AC or less.
- DC-output EVSE: dedicated direct current supply equipment that provides energy from an off-board charger to the vehicle, up to 350 kW DC. Input may be AC, DC, or both.

Equipment Not Covered

ENERGY STAR certified Level 1 EVSE is not included in the listing. ENERGY STAR does not certify the following equipment, so it cannot be listed: DC-output EVSE above 350 kW, pantograph EVSE, wireless or inductive EVSE, and medium-voltage AC input EVSE.

Relationship to the CSMS Specification

Chargers on this list communicate with management software through OCPP. For qualified software, see the EVCAN CSMS QPL. The EVCAN Charge Station Management Systems Technical Specification, Version 1.1, covers the management software.

Source Lists and Screening Method

Source Lists

Source	What it Lists	Used For	Where to Verify
ENERGY STAR certified EVSE, AC-output	Certified AC models with brand name, model name, model number, ENERGY STAR Partner, connectors, type, max power, max output current	Criterion 1; starting point for the listing	https://www.energystar.gov/productfinder/product/certified-evse-ac-output/results
ENERGY STAR certified EVSE, DC-output	Certified DC models with brand name, model name, model number, ENERGY STAR Partner, connectors, type, max power, max output current	Criterion 1; starting point for the listing	https://www.energystar.gov/productfinder/product/certified-evse-dc-output/results
OCA certified products	OCPP Core certificates with certificate number, certificate holder, product designation, tested firmware/software version, advanced security	Criterion 2	https://openchargealliance.org/certified-companies/
Manufacturers' websites	Model name, max power, max output current where information was missing on ENERGY STAR	Reported information as needed	Each manufacturer's website

How the Certified Products are Compiled and Prepared for Listing

The EVCAN Charger List combines two independent certification sources. EVCAN matches ENERGY STAR model names or model group names to OCA product model and/or product family names. Any match that is not an exact or documented model-number match is checked against the manufacturer's published product information before it is included or excluded.

ENERGY STAR may certify a product family through one representative model instead of requiring multiple model records. The OCA introduced product family certificates. One charger is physically tested, and the other models in the family are covered by vendor-submitted test reports produced with the OCA's test tool. In cases where an OCA certificate designates a product family, EVCAN treats every model the manufacturer lists in that family as certified.

To keep the list consistent and accurate, EVCAN applies a few rules when it lists charger information. Output power is reported in kilowatts throughout. When ENERGY STAR data is missing, or appears to show a maximum for an entire product family rather than an individual model's rating, EVCAN uses the manufacturer's published specifications. For some AC models, the ENERGY STAR record does not list rated current or power. In those cases, EVCAN estimates output power from the other specifications in the record.

What the EVCAN Charger List Displays

The Charger List displays nine data fields for each record, drawn from the ENERGY STAR and OCA records described above.

EVCAN Charger List Field	What it Shows	Source
Brand	Manufacturer's brand name as ENERGY STAR designates it	ENERGY STAR
Model Number	Manufacturer's model number as ENERGY STAR designates it, including any wildcard characters ENERGY STAR uses to cover a family	ENERGY STAR
Model Name	Manufacturer's product family name used to match the OCA Product Designation	ENERGY STAR if available, else product website
Type	AC L2 or DC	ENERGY STAR
Max Power (kW)	Maximum output power in kW (ENERGY STAR reports DC values in watts)	ENERGY STAR, if available; otherwise, the product name and product website. Some (kW) values are approximated based on Max Output Current values and known input voltage values.
Max Output Current (A)	Maximum output current	ENERGY STAR if available; otherwise, the product name and product website. Some (A) values are approximated based on Max Power values and known input voltage values.

EVCAN Charger List Field	What it Shows	Source
OCPP 2.0.1 Advanced Security Certification	Yes, when the OCA certificate shows the Advanced Security profile as Pass; otherwise No	OCA certificate
Connectors	Connector types the product offers: J1772, J3400 (NACS), CCS, CHAdeMO	ENERGY STAR, Manufacturer websites
Software Version Certified OCPP 2.0.1 Core	The software or firmware version named on the OCA certificate	OCA certificate

The Charger List also provides the number of ports as recorded by ENERGY STAR as a filter option only.

Criterion 1: ENERGY STAR Certification

The product appears on the ENERGY STAR certified list for AC-output EVSE or DC-output EVSE. AC products certified under ENERGY STAR v1.0, v1.1, and v1.2 are all listed, because later versions have expanded eligibility, rather than constraining it. DC products certified under ENERGY STAR v1.1 or v1.2 are all listed. DC products were not covered in v1.0, and DC requirements did not change between v1.1 and v1.2.

Rationale

- **Measured, not claimed.** Laboratories measure power consumption against fixed EPA test methods. Certified products stay subject to third-party verification testing.
- **Chargers are always-on loads.** They draw power when no vehicle is connected. The No Vehicle, Partial On, and Idle limits reduce wasted energy across an installed fleet, and the DC efficiency requirement reduces conversion losses.
- **A safety listing is a precondition.** ENERGY STAR requires an NRTL safety listing before it certifies a product.
- **The record is public.** EPA publishes the certified lists with brand, model, and test results, so anyone can check a claim without relying on the manufacturer.

Source and Verification

- **Source:** ENERGY STAR certified lists for AC-output EVSE and DC-output EVSE.
- **Verification:** EVCAN confirms that the brand name, product name, and model number appear on the list as ENERGY STAR designates them, and records the ENERGY STAR Unique ID.
- **Published:** brand, model number, type, maximum power, maximum output current, and connectors, taken from the ENERGY STAR record.

Criterion 2: OCPP 2.0.1 Core Certification

The product holds an OCA certificate for OCPP 2.0.1 whose test results show the Core profile as Pass. The certificate matches the product as described in the Source Lists and Screening Method section.

Reported Information

OCPP 2.0.1 Advanced Security Certification: This certification type will display when the certificate shows the Advanced Security profile as Pass, otherwise, it will not display. A product does not need this certification type to be listed.

Rationale

- **Operators can change networks.** Because OCPP is an open, tested standard and version 2.0.1 is designed for extensibility and forward compatibility, EVSE certified to 2.0.1 can move from one CSMS provider to another with less effort than proprietary or 1.6-based installations, supporting longer EVSE service life.
- **Interoperability is verified through testing.** The certificate comes from a laboratory conformance test, and the OCA publishes a way to verify each certificate's authenticity.
- **Version 2.0.1 adds capabilities over 1.6.** Core requirements now include secure firmware updates and Security Profile 2 that were optional in version 1.6. Version 2.0.1 adds a standardized device model, expanded smart charging, support for ISO 15118 communication between EV and EVSE, and extensibility as new features become popular.
- **Version 1.6 is in maintenance mode.** OCPP 2.0.1 is not backwards compatible with 1.6, and 1.6 testing and certification will not be updated. For functionality that 1.6 did not address, vendors rely on proprietary code that is not interoperable across vendors.

Source and Verification

- **Source:** OCA certified products and certificates.
- **Verification:** EVCAN confirms that the certificate is for OCPP 2.0.1, shows the Core profile as Pass, and names a Product Designation that covers the product under the matching rule. EVCAN verifies the certificate's authenticity on the OCA website and records the certificate number.
- **Published:** the software or firmware version named on the certificate, and the Advanced Security result.

References

This section lists the sources used in this specification. Web sources were accessed on October 12, 2026.

1. U.S. Environmental Protection Agency. ENERGY STAR Program Requirements for Electric Vehicle Supply Equipment: Eligibility Criteria, Version 1.2, with Partner Commitments.
2. U.S. Environmental Protection Agency. ENERGY STAR Level 1 and Level 2 Electric Vehicle Supply Equipment Test Method, Rev. Apr-2017.
3. U.S. Environmental Protection Agency. ENERGY STAR DC-output Electric Vehicle Supply Equipment Test Method, Rev. Mar-2021.
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6. Open Charge Alliance. OCPP 2.0.1, Edition 4, Part 0: Introduction.
7. Open Charge Alliance. Certificate OCA.0201.0088.CS, Autel MaxiCharger AC Ultra.
8. Open Charge Alliance. OCPP certified products and certificates.
9. EVCAN. Charge Station Management Systems Technical Specification, Version 1.1. Released April 28, 2026.