

What is an EVSE?

EVSE is an acronym that stands for Electric Vehicle Supply Equipment. It is a technical term created for use in the National Electrical Code, the document that outlines the rules and regulations for electrical systems installations.

An EVSE is the device and related circuit that safely provides the power connection between the home electrical service and an electrical vehicle's onboard charger, drawing power from the utility electric grid to recharge the vehicle's battery. A standardized connector mated to the vehicle port (i.e. the plug), sends a signal from the onboard battery charger to the EVSE controlling its level of electricity consumption.

EVSE come in different power levels. For example, the low power recharge cord provided with most new electric vehicles is technically called a "Level 1" EVSE. It allows you to plug your vehicle directly into a standard 110V wall socket and recharge the vehicle. Charging with this low power option typically takes 6-8 hours for a plug-in hybrid electric vehicle and 12-18 hours for a full (non-hybrid) battery electric vehicle.

The alternative is a higher power, permanently installed EVSE, which is usually called a "Level 2" EVSE. Level 2 EVSE operate off of a dedicated 240V circuit identical to that used by most electric clothes dryers. The advantages of a Level 2 include:

- The ability to safely deliver over twice the power of a Level 1 cord unit, cutting recharge times nearly in nearly half.
- Level 2 EVSE qualify the user for a reduced utility power rate (where available) when used with a dedicated circuit whose sole purpose is to recharge the vehicle
- The EVSE is wall mounted with an extended cable and connector to allow convenient connection to the vehicle
- The mounted location provides safe storage for the cable and connector when not in use



Technically, it is possible to get by without an EVSE for home charging of an EV. However, the purchase and installation of Level 2 EVSE is highly recommended for all owners who plan to drive their EV on a daily basis.