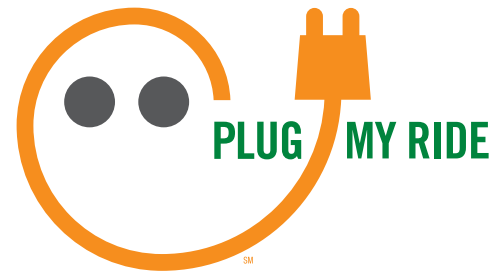


Types of electric vehicle chargers



Level One (120 Volts)

Level 1 charging uses the same 120-volt current found in standard household outlets and can be performed using the power cord and equipment that most EVs come with. For businesses wanting to make this type of charging available on your property, it is as simple as installing dedicated 120 volt outlets in your company parking lot. Many residents can charge in their garage without any electrical upgrades.

You can charge vehicle at:



HOME



OFFICE

Advantages

- Low installation costs
- Low impact on peak demand charges

Disadvantages

- Charge time is slow (EVs will get around 3 or 5 miles of range per hour of charge)

Level Two (240 Volts)

Level 2 charging uses 240 volt power to enable faster regeneration of an EV's battery system. Providing this type of charging requires installation of an EVSE unit and electrical wiring capable of handling higher voltage power. Plug-in America's Accessory Tracker offers an updated list of Level 2 EVSE currently on the market. Homeowners interested in Level 2 chargers should have a qualified electrician install the charging equipment.

You can charge vehicle at:



HOME



OFFICE



COMMERCIAL

Advantages

- Charge time is significantly faster than Level 1 (EVs will get between 10 and 20 miles of range per hour of charge)
- Significantly more energy efficient than Level 1 for short charge events (around an hour or less)

Disadvantages

- Installation costs are higher than Level 1 (as much as \$5,000 for a commercial installation not including the cost of equipment)
- Potentially higher impact on peak demand charges

DC Fast Charging (3 phase)

DC fast charging provides compatible vehicles with an 80 percent charge in 20-30 minutes by converting high voltage AC power to DC power for direct storage in EV batteries. However, automakers currently have two competing specifications for DC fast charging plugs, the CHAdeMO and SAE Combo standards. Nissan and Mitsubishi vehicles use CHAdeMO while upcoming vehicles from U.S. and European manufacturers are planned to have SAE Combo ports.

You can charge vehicle at:



COMMERCIAL

Advantages

- Charge time is reduced drastically. It's nearly as fast as refueling a gasoline vehicle

Disadvantages

- Equipment and installation costs are much higher than level 1 and level 2 charging (\$20,000-\$100,000 depending on equipment and power availability at site)
- Increased peak demand charges
- Competing standards are confusing to potential EV buyers and charging station operators
- Potential issues with cold weather operation



Northeast
Utilities