

How to upgrade to **Level 2 electric car charging**

Like you, many Oregonians have discovered the benefits of electricity as a transportation fuel – lower operating costs, no tailpipe emissions and a reduction in oil imports are just a few. To recharge their electric cars more quickly, many owners have upgraded to Level 2 (240-volt) charging instead of plugging into a regular 120-volt wall outlet. Read on to see if Level 2 charging is right for you.

First, a few basics

The box and cord that connect your car to electric power has a few technical names, but most people just call it a Level 2 car charger. It supplies 240-volt AC electricity. This is the same level of power that runs an electric stove or clothes dryer. An inverter in your car changes the AC power to DC power, which is accepted and stored by your car battery.

The rating of the onboard inverter determines how quickly your car charges its battery. Your auto dealer or owner's manual can tell you the size of your car's inverter – it's typically between 3.3 and 6.6 kilowatts (kW).

The speed your car charges also depends on the rating of the charger. If you decide to upgrade to a Level 2 charger, you'll want to make sure it provides at least as much electricity as your car can accept. For example, if your car can accept 6.6 kW of power but your charger only delivers 3 kW, your charging will be much slower than with a 6.6 kW charger.

Charging levels explained

AC Level 1: This is the cord that came with your car and plugs into a regular 120-volt outlet. Level 1 charging uses AC power and adds about 4 miles for every hour your car is plugged in.

AC Level 2: This is a box that mounts on a wall or post and supplies 3 to 10 kW of 240-volt power. Level 2 charging uses AC power and adds 12 to 24 miles for every hour your car is plugged in.

DC Quick Charge: Your car may come with a DC Quick Charge connector that you can use at public DC Quick Charging stations. These stations supply 50 kW or more of DC power and add as many as 4 miles for every *minute* your car is plugged in. There are three different DC Quick Charging standards – make sure your car fits a quick charger before trying to use it.



How fast do you need to charge?

Here are a few reasons you may want to upgrade to Level 2 charging:

You make longer trips.

After arriving home, you want your car available again quickly.

You make lots of short trips.

You want your car ready to go whenever you are.

Your electric car is your only car.

You'd rather not have to plan your trips or allow for overnight charging.

You have an all-electric car.

You want your car to offer maximum range whenever you need it.

Where can you buy a Level 2 car charger?

Car chargers are available from electric supply companies, home improvement stores, auto dealers, direct from manufacturers or your electrician can purchase one for you as part of the installation job. Some come with a 240-volt cord and plug to connect to a 240-volt outlet.

CAUTION: Before using an existing 240-volt outlet, be sure the circuit is correctly rated to safely supply the charger!

Who can install a Level 2 car charger?

Any licensed electrician can install a car charger. We recommend getting a quote from at least two companies, along with details on how they plan to install the car charger. Ask your electrician to see if your installation can use the State of Oregon Minor Label program, which reduces cost and time.

You or your electrician should contact the PGE Service Desk (at 503-736-5450, 7:00 a.m. - 4:30 p.m. Mon.-Fri. or Service.Coordinators@pgn.com) to make sure the service to your house (wire and transformer) is adequate for the installation of the car charger. When contacting the PGE Service Desk, please provide the manufacturer's electrical rating of your Level 2 charger (example: 3.3 kW) and your address. In many cases, no change or upgrade is needed and you'll be free to have your electrician proceed with the installation.

Your electrician will make sure your service panel can provide the needed power for the car charger. They'll install a new breaker in your electrical panel and then run a circuit to where the car charger will be installed. Finally, they'll mount the car charger on the wall and connect it to the new circuit.



Plug In. Charge Up. Drive On.

Thank you for choosing electricity as a transportation fuel. Maybe you're motivated by how much money you can save with every mile you drive. Maybe you want a greener way to get around town. Or maybe you'd like to be a little less dependent on foreign oil.

Regardless of why you've decided to drive electric, we appreciate your choice and look forward to seeing you on the road!



Find more information online:

PortlandGeneral.com/PlugIn