FAQs

What charging level is needed?

- Level 2 is the most common EV charging for the workplace, fleets, tenants and the public.
- Level 3 DC fast charging is typically installed by EV Charging Networks or utilities because of the high upfront costs. If the site is a good fit for a DC fast charging station, it could be a site host for a charging network.

Will it charge all makes/models of EVs?

- The J1772 connector is standard for level 2 charging and will charge all major EV models. For DC fast charging there are three connector types: CCS (standard for most vehicles), CHAdeMO (standard on some Japanese vehicles) and Tesla (proprietary for Tesla vehicles).

Should EV charging be free or pay-to-use?

- If an EV charger is used 4 hours per day, it would cost about $3/day in electricity. Many workplaces and other businesses offer free charging as an employee benefit and/or a reward for choosing clean transportation options.
- With a pay-to-use model, consider what payment methods are supported by the EV charger. Some require users to have an account and membership card or app associated with that network; while others have a guest payment method or credit card readers.

Where do EV chargers get placed?

- To reduce cost, situate it near electrical infrastructure. It is common to place a dual-port EV charger (a single unit with two cords) at the curb, along the line between two parking spaces.

Are there ongoing costs for the EV chargers?

- Budget for annual maintenance costs, as well as cellular data and software fees for networked chargers.

Resources

- portlandgeneral.com/ev
- goelectric.oregon.gov
- oregon.gov/deq/aq/programs/pages/zev-rebate.aspx

Contact information

pge.ev@pgn.com

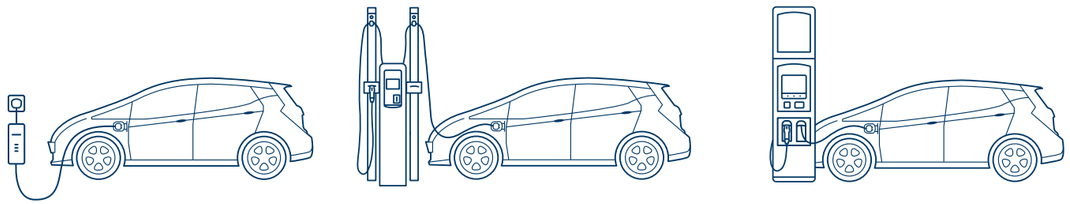
Electric vehicle charging for businesses

PGE

Whether powering a fleet of work vehicles, attracting new business or just keeping customers charged up, here is a helpful guide to get started.

It's a straightforward three-stage process that walks through planing the EV charging project, what's required for installation and how to promote and maintain the chargers.

Level up your EV charging knowledge



Level 1 – AC Charging	Level 2 – AC Charging	Level 3 – DC Fast Charging
Voltage 120V single phase	**Voltage** 208V or 240V single phase	**Voltage** 208V or 480V 3-phase
Amps 12–16 Amps	**Amps** 30–80 Amps (Typ. 32 Amps)	**Amps** 60 Amps +
Charging Loads 1.4–1.9 kW	**Charging Loads** 6.2–19.2 kW (Typ. 7 kW)	**Charging Loads** 25–350kW
Charge Time for Vehicle 3-5 miles of range per hour	**Charge Time for Vehicle** ~25 miles of range per hour	**Charge Time for Vehicle** 80% charge in 30 minutes

EV charging is as easy as 1,2,3

1. Planning

Identify key stakeholders
Contact PGE, an electrical contractor and the property manager.

Evaluate charging needs
Establish how many chargers and what types of chargers to install.

Check the electrical service
A licensed electrician can assess the building's electrical capacity.

Choose a site
To keep cost low, locate chargers as close to existing infrastructure as possible.

2. Installation

Select chargers
Consider a networked charger for smart charging capabilities.

Estimate Costs
Get multiple bids from trusted vendors.

Future proof
Plan to include extra conduit and upsize equipment to account for future EV chargers.

Build
Use contractors with EV experience.

Cost Example

Installing Level 2 chargers connected to existing building power

Potential infrastructure	Cost range
Charger (per unit)	$500–$3,000
Charger installation (per unit)	$500–$2,000
Trenching, conduit and wiring	$1,000–$20,000
Permitting	$500–$2,000
Estimated Total Cost	**$2,500–$27,000**

3. Follow-up

Promote
We can suggest creative campaigns to drive interest to the chargers.

Maintain
Contract with an equipment provider or use an internal crew.

Check-in
Re-evaluate in a few years to keep up with EV growth and technology.