FREE HOMEOWNER GUIDE

100 amp vs 200 amp panel: which does my house need?

The short answer

A 100-amp panel is enough for a smaller home with gas heat, a gas range, and modest electrical loads. You want 200 amps if you are adding an EV charger, a heat pump, an electric range, or planning to electrify more of the house over time. The real answer does not come from the square footage though. It comes from a load calculation, which is the only way to know how much of your service is actually spoken for.

Amperage is the total amount of electricity your home can pull from the utility at one time. A 100-amp service can deliver 100 amps at 240 volts, a 200-amp service twice that. Most homes built before the 1990s were fed 100 amps, which was plenty when heat and cooking ran on gas and nobody charged a car in the garage.

When 100 amps is genuinely fine

Bigger is not automatically better, and you do not need to upgrade just because 100 amps sounds small. Plenty of homes run comfortably on it.

- ☐ Gas furnace, gas water heater, and a gas range or cooktop
- ☐ A smaller home without electric heat or central air pulling hard
- ☐ No EV charger and no plans for one
- ☐ The panel is a modern brand with open breaker spaces and rarely trips

When you have outgrown it

Modern all-electric living adds big continuous loads that a 100-amp service was never sized for. The more of these that apply, the more likely 200 amps is the right move.

- ☐ Adding a Level 2 EV charger, which can draw 40 to 60 amps for hours
- ☐ Switching to a heat pump, electric furnace, or a heat-pump water heater
- ☐ An electric range or cooktop replacing gas
- ☐ The panel is full, with no open spaces or only tandem breakers left
- ☐ Breakers trip under normal use, or you are running out of circuits during a remodel

What about 150 amps

There is a middle option. A 150-amp service covers a lot of homes that need more than 100 but are not going fully electric, and it can be the cost-effective pick for a home adding one large load. Which of the three fits

your house is exactly what a load calculation settles, by adding up your real demand rather than guessing from the panel label.

Reading your panel, and the cost

You can usually find your service size on the main breaker at the top of the panel: a number like 100, 150, or 200 stamped on its handle. That is your service amperage, not the sum of the smaller breakers below it. If it reads 100 and you are planning to electrify, that is the number to start the conversation around.

Upgrading service in the Portland metro typically runs between $2,500 and $7,500, depending on your current service size, the condition of the meter and service mast, whether the panel is indoors or outdoors, and how much utility coordination is involved. Note that a bigger main breaker alone is not an upgrade: going from 100 to 200 amps usually means new service-entrance conductors, a new meter base, and utility involvement, which is the difference between a panel upgrade and a service upgrade covered in our panel upgrade vs service upgrade guide. For the full breakdown, see our Portland panel upgrade cost guide. A licensed electrician should run the load calculation before quoting; the range is a starting point, not a promise.

Frequently asked questions

Is 100-amp service enough for my house?

It often is for a smaller home with gas heat, a gas water heater, and a gas range, and no EV charger. It becomes tight when you add big electric loads like a Level 2 charger, a heat pump, or an electric range. The reliable way to know is a load calculation, which adds up your actual demand rather than guessing from the home's size.

Do I need 200 amps for an EV charger?

Not always. A modern 200-amp panel usually has room for a Level 2 charger, while a 100-amp service already running other large loads often does not. Sometimes a lower-amperage charger or a load-management device makes it work without upgrading. A load calculation before installation is what tells you for sure, and we run one on every EV charger job.

How do I know what amp service I have?

Look at the main breaker at the top of your panel. The number stamped on its handle, commonly 100, 150, or 200, is your service amperage. That is the total your home can draw at once, not the sum of the smaller breakers beneath it. If you cannot find or read it, an electrician can confirm it quickly.

How much does it cost to upgrade from 100 to 200 amps?

In the Portland metro, service upgrades typically range from $2,500 to $7,500, depending on your current service, the condition of the meter and service mast, indoor versus outdoor location, and utility coordination. Going from 100 to 200 amps usually involves new service-entrance conductors and a new meter base, not just a bigger main breaker. A licensed electrician should assess your specific setup before quoting.

Sources

1. Smart Charging Program, Portland General Electric. https://portlandgeneral.com/energy-choices/electric-vehicles-charging/charging-your-ev/charging-your-ev-at-home
2. Charging Electric Vehicles at Home, U.S. Department of Energy, Alternative Fuels Data Center. https://afdc.energy.gov/fuels/electricity-charging-home

> **Need a licensed electrician in the Portland area?**
> Call Smiley Electric at (503) 484-7556 (Mon–Sat, 7am–5pm) or visit smileyelectric.net/contact. For sparks, smoke, a burning smell or a hot panel, turn off the power if it is safe and call right away.

Reviewed by Joshua Smiley, owner & master electrician, Smiley Electric. Last reviewed November 13, 2026. Online version: smileyelectric.net/help/100-amp-vs-200-amp-panel/. General information, not a substitute for an on-site inspection.

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