

PGE Residential Bidirectional Charging Systems

Interconnection Guide & FAQ



When is a utility interconnection required?

It depends. If the bidirectional charging system will operate in parallel with the grid (even if it will not export to the grid), then it must meet PGE's interconnection requirements and follow PGE's interconnection process.

Grid-parallel means that the bidirectional charging system is operating while electrically connected to, and synchronized with, the utility grid - the bidirectional charging system and the utility grid are supplying power to the home electrical system at the same time.

If the bidirectional charging system will only operate as a backup generator during an outage and will be isolated from the grid with an open-transition transfer switch, it does not need to go through PGE's interconnection process. In this scenario, the system must be installed by a licensed electrician and approved by the local electrical inspector. The electrician may call PGE to request a meter reseal during installation, and a PGE meterman may perform a witness test to verify the transfer switch operates correctly and prevents any backfeed onto the grid.

Is Bidirectional Charging considered Energy Storage?

Yes. For the purposes of the interconnection process, PGE considers bidirectional charging systems a type of Energy Storage. When the electric vehicle is plugged into the bidirectional charger, allowing it to charge and discharge the EV's battery, it operates very similar to a stationary battery energy storage system. Energy Storage is a generic term that encompasses both stationary batteries and bidirectional charging systems. When filling out the interconnection application and selecting the *Type of Energy Storage System*, there will be an option for "Bidirectional EV Charger." *Note: PGE may change this definition in the future.*

What is the interconnection process?

Step 1: [Click here](#) to Submit an Interconnection Application

Use PowerClerk to submit the **New Standalone Energy Storage Application** for standalone bidirectional charging system installations.

The installer will typically submit the interconnection application and manage the interconnection process on the customers' behalf. Customers or installers can log in to view the application at any time.

*Note: If the customer has solar or solar and/or storage already onsite or is adding these systems at the same time as installing a bidirectional system, use the **New Net Metering Application**, not the Standalone Energy Storage Application in PowerClerk.*

Step 2: Wait for PGE Confirmation - Allow up to 3 business days

PGE will send an email confirmation that the application was received.

Step 3: Technical Review - Allow about 10 business days for review and approval

The PGE Technical Team will review the application to make sure the grid can safely and reliably support the system.

Note: If any upgrades are needed, it is generally at the customer's expense. PGE will provide the applicant with details and a cost estimate. For this reason, PGE recommends waiting for approval of the application before proceeding with installation.

Step 4: Application Approval & Signing of the Interconnection Agreement

Once PGE has approved the application, you can install the bidirectional charging system and sign the interconnection agreement in PowerClerk.

Step 5: Submit the Interconnection Request

After the installation has passed its electrical inspection, the installer will submit an interconnection request in PowerClerk. PGE will review the signed agreement and inspection approval, and if approved, will request a bidirectional meter on your behalf.

Step 6: Bidirectional Meter Installation & Permission to Operate

Once the bidirectional meter is installed, PGE will provide Permission to Operate (PTO) and the process is complete!

How much does an interconnection application cost?

For systems with a capacity of 25 kW or less, **the application is free of charge!** However, if there is a high demand for PGE's infrastructure in your neighborhood, a PGE engineer may need to conduct a study and may request a Tier 4 application be submitted, which does have a fee. This fee depends on the requested system size.

What if I already have solar or solar + storage or I want to add it?

Do not use the **Standalone Energy Storage Application**, instead please apply using the **New Net Metering Application** in PowerClerk. This is a separate application if there is any existing generation (i.e. solar) or if it is being installed alongside the bidirectional charging system. There will be a place to enter information on the existing or planned generation system.

What are common issues PGE finds in interconnection reviews?

Customer Information

- The customer name and address entered in PowerClerk must match the "main customer" or "co-applicant" name and address on the PGE account

Account Information

- Ensure the account type (residential vs commercial) is accurate
- The PGE account must have an active Service Agreement
- The PGE meter number must be correct per the account number entered

Documentation (Site Plan and One Line)

- The customer name and address on documents must match those in the PowerClerk application
- Equipment listed on documents must match those in the PowerClerk application
- Equipment installed in the field must match that listed in the documentation (witness test will be rejected if there's a discrepancy)
- Site Plan and One Line must be aligned (e.g., disconnect switches)

Interconnection Request

- The customer must sign the interconnection agreement
- The signature must match the customer name on the PowerClerk application
- The address listed on the inspection report must match the address on the PowerClerk application
- The inspection report must say approved

What technical requirements should I be aware of?

Bidirectional charging system installations must meet local electrical code and [PGE's Electric Service Requirements](#). Specifically, ESR Section 1.5 states requirements for customer-owned storage/batteries which apply to bidirectional charging systems as well. Some notable requirements:

- Bidirectional charging systems greater than 7.2 kW require a lockable disconnect switch with a visible open located within 10 feet of the PGE meter
- A clearly legible, hard-plastic (phenolic) warning label is required (see Section 3.10.8 for labeling requirements)
- Bidirectional charging equipment must be at least 36" from the PGE meter

Note: these requirements are listed here for convenience but always use the latest version of the ESR when designing the bidirectional charging installation.

Does PGE allow meter collars?

Per PGE ESR Section 3.10.7, customer-owned meter socket adapters and meter collars are not allowed on PGE services.

What if my system is not eligible for the V2X demonstration?

Customers can still interconnect, but the system will not be permitted to export to the grid; the system can only be used to offset home load. Customers may lower their PGE bill by enrolling in PGE's Time-of-Day (TOD) rate or Peak-Time Rebates (PTR), using their EV to power the home during peak periods, and recharging it during off-peak periods.

When applying to interconnect a bidirectional charging system that is not eligible for the V2X demonstration:

- Select "The energy storage equipment is not listed" in the PowerClerk application (because the system will not appear in the dropdown menu)
- Enter the system's technical specifications in the text box.
- Submit all required documentation.

Can I use my EV's outlets to power my home in an outage?

If the electric vehicle has 120V or 240V outlets, and a customer wants to use them in a power outage, plug the devices directly into the outlet on the vehicle (using properly rated extension cords if necessary). This does not require any utility involvement because it's completely isolated from the grid.

Running an extension cord from an outlet on the vehicle to a generator or other device that distributes power to your home's electrical panel would require an open-transition transfer switch to isolate the system and prevent power from backfeeding to the grid.