



Generac PWRcell - General Overview of Operation

This operational overview applies to the following products:

Generac PWRcell 7.6kW Inverter: Model number APKE00014

Generac PWRcell Battery Cabinet: Indoor / Outdoor Rated

This overview contains instructions for the operation of the Generac PWRcell home energy storage system. This product, when installed, is permanently wired to the home electrical panel.

There are three main components as shown below, including the PWRcell Inverter (1), the PWRcell Battery Cabinet (2), and the protected loads backup panel (3).



System Monitoring

After we complete the system commissioning process, the PWRview monitor can be accessed via the PWRview mobile app or a customer specific url.

You will receive an automated email to the address you provided with an invitation to setup your account after the installer has completed the system installation. You may want to check your Spam or Junk Mail box if you did not receive the email in your IN box. The email will come directly from Generac.

From the monitoring system, you will be able to:
Monitor your solar, battery, and home energy consumption.



Operation

The Generac PWRcell home energy storage system is fully automated. The system will be pre-programmed to connect the system to the grid after AC connection and DC battery source is applied. The default mode of operation will be set to Solar Self Supply.

While the monitoring system provides a complete dashboard of your system's operating state, there is also a display on the front of the inverter cabinet that can be used to determine its present operating conditions.



IMPORTANT! In the event that the system has gone out of service, please consult your installer for guidance. Depending on the nature of the service fault, our technical department may advise you to reset the system on your own, or schedule a service visit.

Battery Cabinet Status LED

The PWRcell battery is the storage component of the PWRcell system. The battery can be used for grid-connected solar applications, such as self-supply, rate arbitrage, and clean backup power. The chart below describes the color and strobing interval of the LED that communicates battery status.

LED State	Interpretation (strobe interval)
Green, 7 sec solid at power up	Initializing, Manual Enable detected
Red, 7 sec solid at power up	Initializing, Manual Enable not detected
Red / green, alternating	Initializing, connecting battery and REbus, system energizing
Green, solid	Enabled, charging
Green, strobe	Enabled, standby (3 sec)
Green, rapid flashing	Enabled, discharging
Orange, solid	Waiting
Orange, strobe	Asleep (8 sec)
Red, strobe	Disabled (3 sec)
Red, rapid flashing	Error state



Backup Power Operation

This system will provide limited backup power to dedicated electrical outlets located inside the protected loads electrical sub panel. **The battery energy storage system will not supply power to the entire home during a grid outage.**

There is an option to hard wire limited emergency circuits from within the home to this protected load panel for an additional fee. The power source is limited in power rating and duration, both of which are dependent on the nature of the loads connected to the system, and the available solar supply. This system is designed to reliably provide power to a refrigerator, home lighting, home electronics, and small appliances. Please refer to the document titled [Understanding Protected Loads] for more information.



IMPORTANT! Portable extension cords connected to a backup circuit should be limited to 30 feet.

While in Backup Mode, the battery charges when PV power is greater than the demand of the protected loads. However, as the battery provides power to the loads, its state of charge (SoC) decreases. If the battery SoC reaches the minimum setpoint (for example at night when there is no PV generation), the system enters Sleep Mode. In Sleep Mode, the inverter shuts down and the connected loads will temporarily lose power until PV generation is available to recharge the battery.

While in Sleep Mode, the battery performs Power Searches for PV generation at regular intervals.

During a Power Search, the battery wakes up periodically and scans for potential sources of power. If PV is available, then the battery will begin charging. Once the battery SoC is 5% above the minimum setpoint, the PWRcell system may resume exporting power to support backup loads. If Power Search does not discover other sources of power, the battery returns to sleep to conserve energy.

The battery can only perform a Power Search a certain number of times before it runs out of energy completely. Once the battery depletes its Power Search reserve, the battery will not be able to energize on its own. Another source of power is required to charge the battery.

See the Generac PWRcell Inverter Owner's Manual for more information.

<https://www.generac.com/service-support>

If you experience nuisance power trips while in backup operation, you may need to reduce the power requirement by turning off some devices to prevent further power tripping events. The energy storage system will automatically reset after a short period of time and reattempt to meet the power requirement.

If you do not have power to connected devices while in backup mode, please check to see if any circuit breakers may need to be reset in the protected loads panel. Some breakers and outlets may also have built in ground fault Interrupt (GFI) circuitry for additional protection and safety that may need to be reset.

In the event that there is not enough solar generation to maintain battery operation in an extended duration grid outage, the battery system will automatically shutdown to a standby state with a minimum operating reserve, and attempt to restart at the beginning of the next solar charge cycle. During the standby state, there will no longer be any backup power available. This cycle will repeat until, a) the grid power returns, or b) the battery depletes to a hibernation state, where no backup power is available. In the event that the battery reaches hibernation, the grid power must be available to restart the battery system.

IMPORTANT! This product does not support automatic gas generator integration. Do not attempt to connect a gas generator to the battery system. If generator support is required, consult your installer regarding a separate manual transfer to your backup electrical panel.

Maintenance - General Upkeep

Keep the area around the PWRcell battery neat and clean at all times. Ensure surrounding area is free of sand, leaves, branches, pet hair or other debris that could obstruct airflow in or out of the unit.

Do not store items on top of, under, leaning against, or propped up where they might fall on the PWRcell battery.

Do not allow irrigation sprinklers or other water sources to spray or flood the unit.

Clean the exterior of the enclosure with a soft cloth.

Inspect the unit. Look for conditions that could hinder performance or safety, such as (but not limited to):

- Blocked vents.
- Dirty intake filter.
- Loose / missing hardware.
- Loose or broken electrical connections.

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IMPORTANT! An internet connection is required in order to make warranty claims.