AusNet

Why doesn't solar work during blackouts

Firstly, it's technical.

The amount of energy generated by your solar panels varies depending on the amount of sunlight reaching the panels. Your power needs also change depending on the appliances you use and when you use them.

If your solar system does not provide enough power to meet your household needs at any time during the day, then your connection to the grid provides you with a stable flow of power to safely support your home.

In the event of a power outage, the grid can't stabilise the solar power supply to meet your energy needs and voltage fluctuations could possibly damage your equipment and appliances.

In this case, your solar inverter will automatically disconnect itself from the grid to protect your property from damage.

Secondly, it's for safety.

If your solar panels are generating more power than you are using, the system will export any excess power you make into the grid. During a power outage, we send our repair crews to find and fix the faults.

To make sure our crews are protected, it's important that they know which powerlines are safe to work on. If solar systems continue to push electricity into the powerlines, their safety could be at risk.

For these reasons, solar systems must automatically shut down during a power outage.

Solar systems can sense if you are connected to the network. When there's a power outage on the network, they automatically shut down to protect customers and the community.

What can you do to prepare?

This depends on what your power requirements are. How much power do you need? How steady is your demand, and how important is an uninterrupted flow of power?

It's important to consider how a power outage might affect your home or business. Some people use a small fuel generator – for example, to run a water pump on a rural property. Or you might consider installing a UPS device (Uninterrupted Power Supply) to power small devices, such as a lamp or laptop. We suggest contacting an electrician for advice on what works best for you.

For more information and tips, visit **ausnet.com.au/outages**

Battery storage systems

A battery storage system can give you power when the sun is not shining and help support a steady and constant power supply in your home.

They can also provide the necessary backup power supply to run some or all of your household appliances but the cost and complexity for different energy resilience options varies greatly.

There are three main types of battery storage systems:

1. **No backup power:** the battery only works when the network is available. Similar to a solar system, this battery is used to provide power to your home, supported by the grid connection. These systems are typically simpler and more cost-effective because they don't require complex wiring or backup capabilities.
2. **Limited backup power:** the battery is usually wired up to power a single circuit in the house, supplying only specific essentials – for example, a fridge, lights or water pump. This setup ensures that key items keep running without needing a larger, more expensive battery to support an entire house.
3. **Full backup power:** these systems require careful design, special wiring and switchgear to safely isolate the house from the grid during an outage. The battery can power the entire house (for the duration of its storage capacity). While this solution provides the greatest level of resilience, it is much more expensive.

If you are installing a solar system from scratch, and continuity of supply is important to you, you can explore the many battery options.

If you already have a solar system, you can add a battery into the system. You may already have a hybrid solar-battery inverter, or you may need an additional battery inverter.

We suggest researching the different options and finding one that works best for your household and energy usage.

For more information, visit **solar.vic.gov.au/solar-buyers-guides**