NSW Home Solar Battery Guide

Practical example: Scott

Scott wants to become more self-sufficient and have backup power for his home office.

Profile

Name: Scott

Location: Suburban fringe

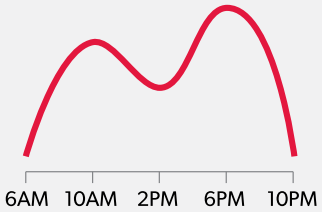
House type: 4 bedroom

Occupants: 2 adults, 2 teenagers

Tariff: Flat

Existing solar: 4 kW

Daily electricity usage profile:



Daily average: 20 kWh

Annual total: 7,300 kWh

Overview

Scott lives two hours outside of the city and power outages happen sometimes when there is a storm. He installed solar panels a few years ago but realised they don't provide power during an outage.

Scott operates critical business servers from his home office so wants to install batteries as a backup for when a power outage occurs.

By talking to a local solar and battery installer he learned that not all battery systems are designed to provide backup. While it was a bit more complicated than he thought, he thinks that achieving up to 24 hours of backup will be sufficient and his business will cover some of the costs.

What did Scott decide?

Solar: No additional solar.

Battery: 13.5 kWh battery, of which 10 kWh is reserved for power outages, and 3.5 kWh is used to regularly store excess solar for use at night.

Uninterruptible power supply: As continuous power is essential for Scott, he is willing to buy a system that may never pay back its cost.

Summary

Payback period: 26 years

Battery warranty period: 10 years

System cost: $13,500

Annual savings: $530

Solar exported: 32%

Self-sufficiency: 51%

Assumptions and notes:

- Not all battery systems have 'backup' functionality, you will need to check with your supplier when selecting a system to confirm this. Additional costs for an inverter with this capability plus an isolation switch may be required if the battery system does not already have 'backup' functionality.
- Self-sufficiency refers to the percentage of the total energy consumption supplied either directly by the homeowner's solar, or by stored solar supplied by the solar battery.
- Annual savings from solar storage is $130, while annual benefits from avoided power outages is assumed to be worth $400.

Takeaways

1. Check whether the system you plan to buy can operate during power outages.
2. If you get a system with backup functionality, check which appliances you can run simultaneously on backup, and for how long.
3. For some people, greater self-sufficiency and having backup power is more important than the payback period.

For more information, download the NSW Home Solar Battery Guide: energysaver.nsw.gov.au/solar-battery-systems