



# Solar Batteries Fact Sheet (October 2025)

## What is a Solar Battery?

### What is a Solar Battery?

- A battery installed at your home, that stores solar energy (kWh) produced by your panels for later use.
- Uses lithium-ion (Li-ion) battery chemistry — durable, efficient, deep-cycling.
- Expected lifespan: 10+ years with ~80% of original capacity.

### Why Consider a Battery?

- Solar feed-in tariffs are currently low due to excess middle-of-the-day solar on the grid → it is harder to gain bill savings with solar alone.
- Export charges for midday solar are likely coming soon.
- Evening peak electricity rates are high — a battery will allow you to use your stored solar power instead.
- Energy security: most batteries can be used in "back-up mode" → keep lights and essential appliances running when the main grid is down.

## What is a Solar Battery? cont'd

### Choosing the Right Battery

- Use Clean Energy Council (CEC)-approved products.
- 10 kWh+ capacity suits most homes; expandable systems available.
- Examples of reputable battery brands (NSW-approved for VPP): *Tesla, SigEnergy, BYD, Sungrow, SolarEdge, Alpha-ESS, Goodwe*.
- Avoid "too-good-to-be-true" deals — always check credentials and speak to trusted local installers.

### Battery Safety

- Quality batteries include multiple safety layers, and comply with rigorous standards.
- Household fires due to solar batteries are *extremely rare*: 1 in 2022, 3 in 2023 across Australia. Culprits in battery fires typically are E-bikes/scooters, often imported bypassing Australian safety standards.
- Solar batteries are subject to strict installation rules.
- No insurance premium increase for compliant systems.

## Your Existing System

- Speak to a local installer - they can help you decide on the best size by looking at your electricity needs.
- Check your inverter — is it "battery ready"?
- Older solar systems (> 10 yrs) may need a full upgrade.
- Ensure battery capacity matches solar generation.

## How Big Should My System Be?

Household	Daily Use (kWh)	Battery Size (kWh)	Approx. Cost* (\$)
2 people	~10-20	~10+	\$10,000
Medium family	~25-35	~12-15+	\$13,000-\$20,000

- Battery cost rule of thumb: ~\$1,000 per usable kWh (before rebates).
- Install as much PV as roof allows — good installers tailor design to your needs.

## Rebates & Incentives

- Federal Rebate: ~30% off (max ~ \$372 per usable kWh); applied automatically by your installer.
- NSW VPP Incentive: ~\$400 to join a Virtual Power Plant (VPP); must apply via an Accredited Certificate Provider.

## "You'll Never Pay a Bill Again" ...?

- Not quite.
- Most retailers still charge ~\$2/day supply fee.
- Small feed-in tariffs = limited offset.
- Trading via VPPs, VENs or on through Amber Electric plans may reduce bills further.

### Buy Local

- Easier warranty and service support.
- Accredited local installers know site conditions and regulations.
- Get references from previous customers.
- Avoid one-size-fits-all systems.

## Will You Get a Return?

- Typical setup (10 kWh) after rebate ~ \$8,000.
- Average non-solar bill: ~\$2,000/yr → payback the battery cost in 4-8 years.
- Rising electricity prices = faster return on investment.
- Environmental benefit and energy independence add extra value.

## Other financial programs and incentives

- Virtual Power Plants
- Amber Electric
- Virtual Energy Networks

For more details  
see reverse side



## Other Incentives for Solar Batteries

### Virtual Power Plants (VPPs)

#### What is a Virtual Power Plant (VPP)?

- VPPs are a way of connecting many solar batteries together through software.
- To join a VPP you sign up with a "VPP provider" - they will have access to control your battery remotely.
- You may need to change your electricity retailer to participate in a VPP.
- VPPs help keep the grid more renewable by replacing fossil fuel generation in times of peak demand, with stored energy that is mostly from solar. They also help support the grid in times of grid stress or faults.

#### Considerations for joining a VPP

- In NSW there is an upfront VPP incentive: about \$400 for a 10kWh battery, or \$1000 or more for 27kWh battery.
- There are many different VPP providers, and they *may* offer other incentives e.g. cheaper rates or higher feed-in tariffs.
- When you are part of a VPP, it may mean you have less battery capacity "reserve" for backing up your house if the grid goes down - you should weigh this up against the incentives.
- VPPs are quite new: we expect that the offers from VPP providers will change and evolve over the next few years.
- Learn more at: <https://www.solarquotes.com.au/battery-storage/vpp-comparison/>

### Amber Electric (Wholesale Energy Retailer)

#### What is Amber Electric?

- An electricity retailer that gives access to the "wholesale energy price" (instead of "fixed rates") for a \$25/month fee.
- Amber app integrates with compatible solar and batteries to optimise your bill savings.
- You still pay a daily connection charge (about \$2) and network fees (about 15c/kWh in our area).
- Amber have a program that qualifies for the NSW VPP incentive, called "SmartShift".
- Amber's "Bill Guarantee" ensures your total quarterly bill is not higher than an average "fixed rate" bill in your area.
- Helps keep the grid renewable by encouraging energy use during the day, when generation is mostly from renewables.

#### Who is Amber Electric for?

- Likely a great option for homes with a solar battery – most likely to get good savings through Amber.
- *Might* be a good choice for households without solar or battery, if they are able to shift their energy use to times when electricity is cheapest (middle of the day), e.g. shift when you charge an EV, run washing machines, dishwashers etc.
- Probably won't benefit households without solar or battery, that are unable to shift the times when they use energy - e.g. many of us are away at work and can't run appliances in the middle of the day.
- Learn more at: <https://www.amber.com.au/>

### Virtual Energy Networks (VENs)

#### What is a Virtual Energy Network (VEN)?

- A VEN allows households and small businesses to trade clean electricity using the existing power grid.
- If you have solar panels, and generate too much energy, you can share it with others.
- If you don't, or can't, have solar, you can still access local, renewable energy – often at better rates.
- Prices are mutually agreed – buyers save, and sellers earn more. Everyone benefits. Daily supply fee remains.

#### Deakin University Research Study

- Aims to provide robust evidence on the benefits of peer-to-peer energy trading, boosting local renewable energy use.
- It will help consumers get more value from their produced energy, and others can buy cheaper energy.
- You may need to change your electricity retailer to participate in the study.
- Find out more/register your interest: [deakin.edu.au/faculty-of-business-and-law/research/virtual-energy-network](http://deakin.edu.au/faculty-of-business-and-law/research/virtual-energy-network)