



Solar Made Simple:

Solar, Batteries and Rebates

26 June 2025



Energyze North Shore Inc

- Aim to accelerate transition to renewables and reduce emissions via electrification, rooftop solar, batteries
- We are all local residents
- Not-for-profit and non-political volunteer association
- 3rd year as a group delivering peer to peer webinars
- Working with Ku-ring-gai Council, Rewiring Australia, schools, shopping centres, & residents

What we'll cover

1. Savings and environmental benefits
2. System size (e.g panels, inverters, batteries)
3. Costs, finance & rebates for solar & batteries
4. VPPs
5. Choosing your installer
6. Local case studies
7. Next Steps
8. Q&A

Why install solar?



Save money (solar)

- Up to 60% off your electricity bill
- Pays for itself usually in 3 - 6 years
- Annual ROI of more than 15%
- Savings continue for life of system



Make a difference (solar & battery)

- Reduce your emissions
- Provide renewable energy to the grid
- Powerful community signal
- Accelerate our clean energy transition



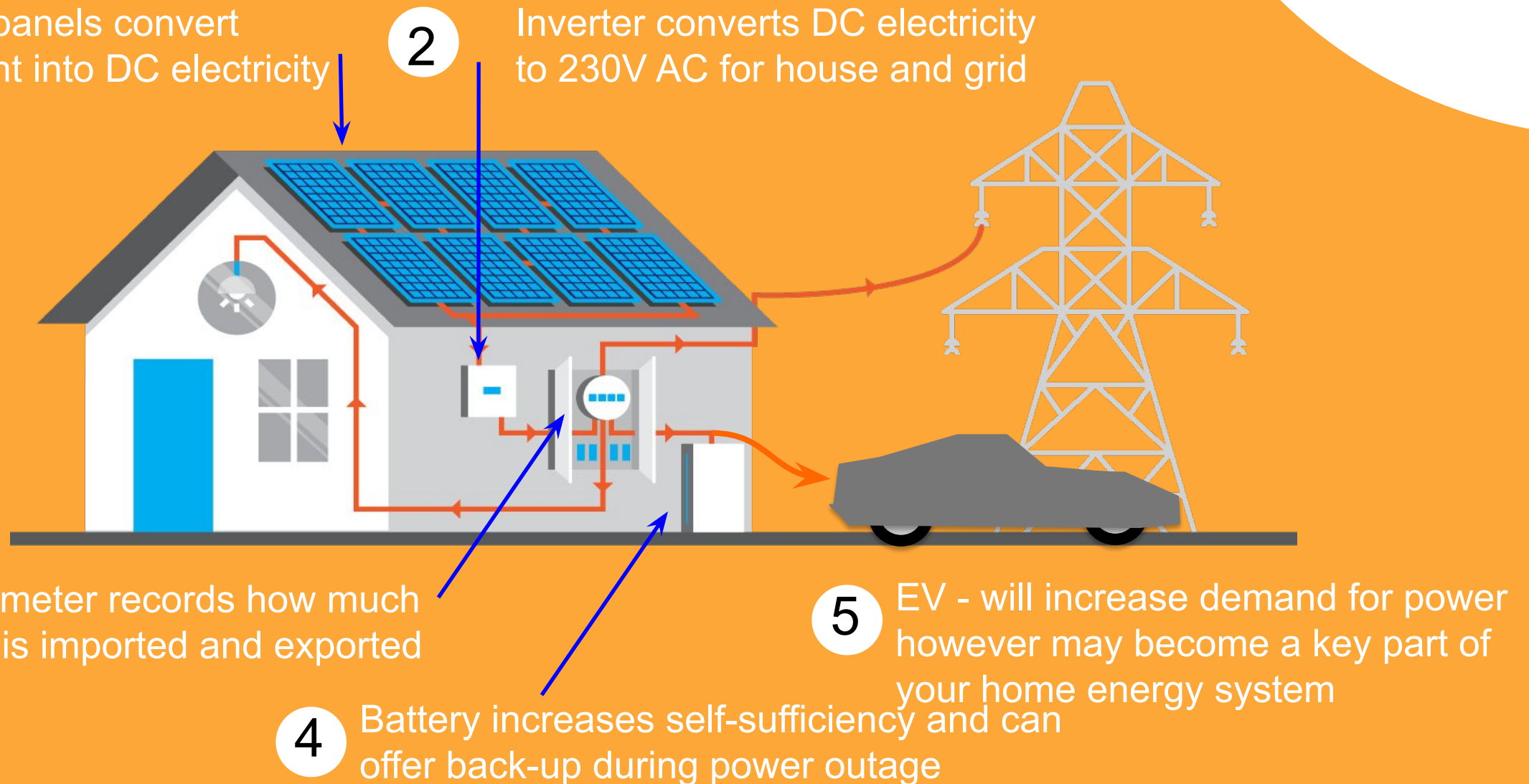
EnergyZE
Let's go for zero!

zero
emissions
SYDNEY NORTH

Rooftop Solar & Batteries



How does solar work?

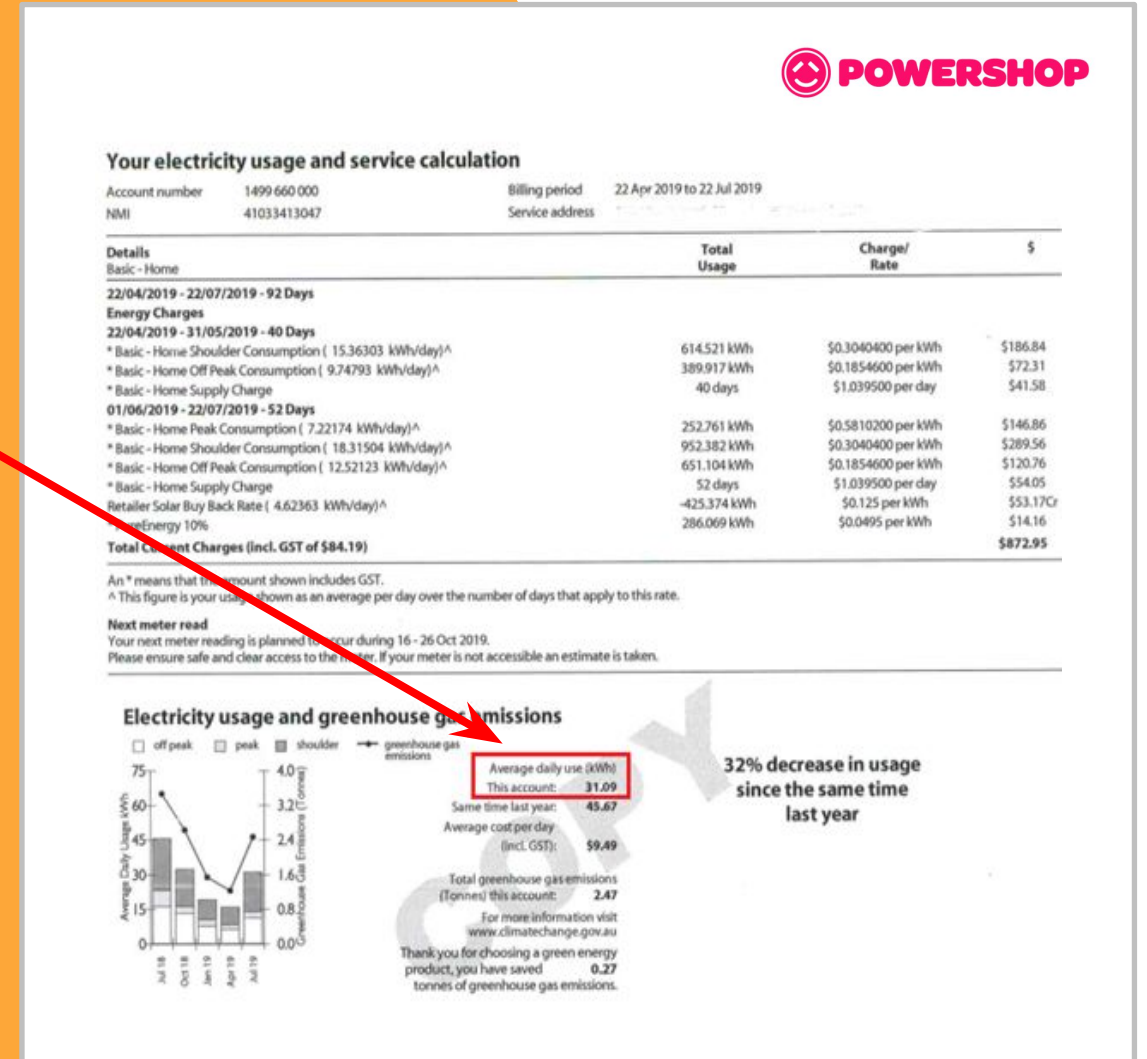


What solar size?

As much as you can!

Depending on:

1. Your energy consumption
2. Roof size, orientation, shading
3. Budget
4. Connection i.e.
 - Single phase connections up to 13.2 kW with 10 kW inverter (Ausgrid area)
 - 3-phase connections up to 30 kW



- Built by the UNSW for the APVI (Aust PV Institute), partnered by the Australian Government.
- <https://www.sunspot.org.au/>
- It estimates system size, how many solar panels needed, best placement for your panels, \$ saved and amount of carbon emissions saved.
- It will also calculate size of battery to meet your needs and impact on energy bills

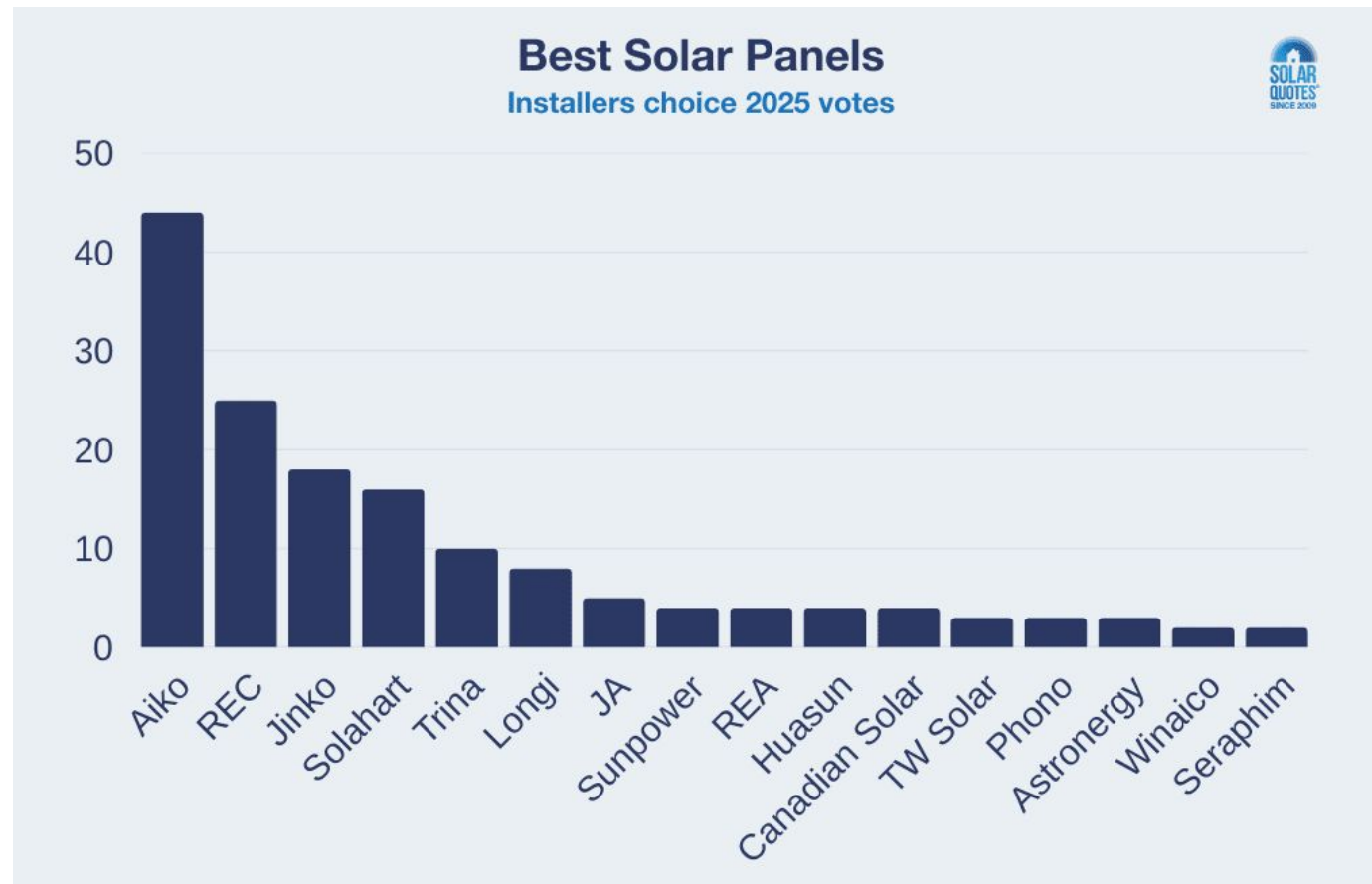
Solar panels

What to consider?

- Long product warranty (as well as performance warranty)
- High panel efficiency
- Size/shape
- Appearance
- Manufacturing country of origin
- Price (rule of thumb \$1,000 per kW installed)



Solar panels



Source: Finn Peacock, SolarQuotes
(2025)

Every year, SolarQuotes surveys its installers for their recommendations of the best solar panels as part of the **Installers' Choice Awards**.

Aiko; REC and Jinko are the top three brands 161 of their installers recommended in 2025.

Inverters and Optimisation

The inverter converts DC (direct current) from the sun to AC (alternating current) for use in the home.



String Inverter

Handles DC from a string of panels which are unimpeded by shade



Microinverters

Installed behind each panel, converting DC power to AC power. Longer lifespan, more expensive, but good for more complex roof layouts, and shading. Offer greater flexibility for adding panels in the future



Power Optimisers

Attached to each panel. Cost effective shading solution

Micro-Inverters and Optimisers enable panels to perform independently.

Consumption monitor

- Monitors electricity production and usage in real time
- See usage on your phone
- Helps you become energy savvy
- Brands such as Enlighten, Fronius, Solaredge, & Solar Analytics offer user-friendly monitors
- Batteries come with own monitor





Savings

Store your solar power to use throughout the day and after dark



Environmental Benefits

Most of your electricity comes from solar and you contribute to the stability of the grid



Back-up

You still have power during a blackout (check set-up)

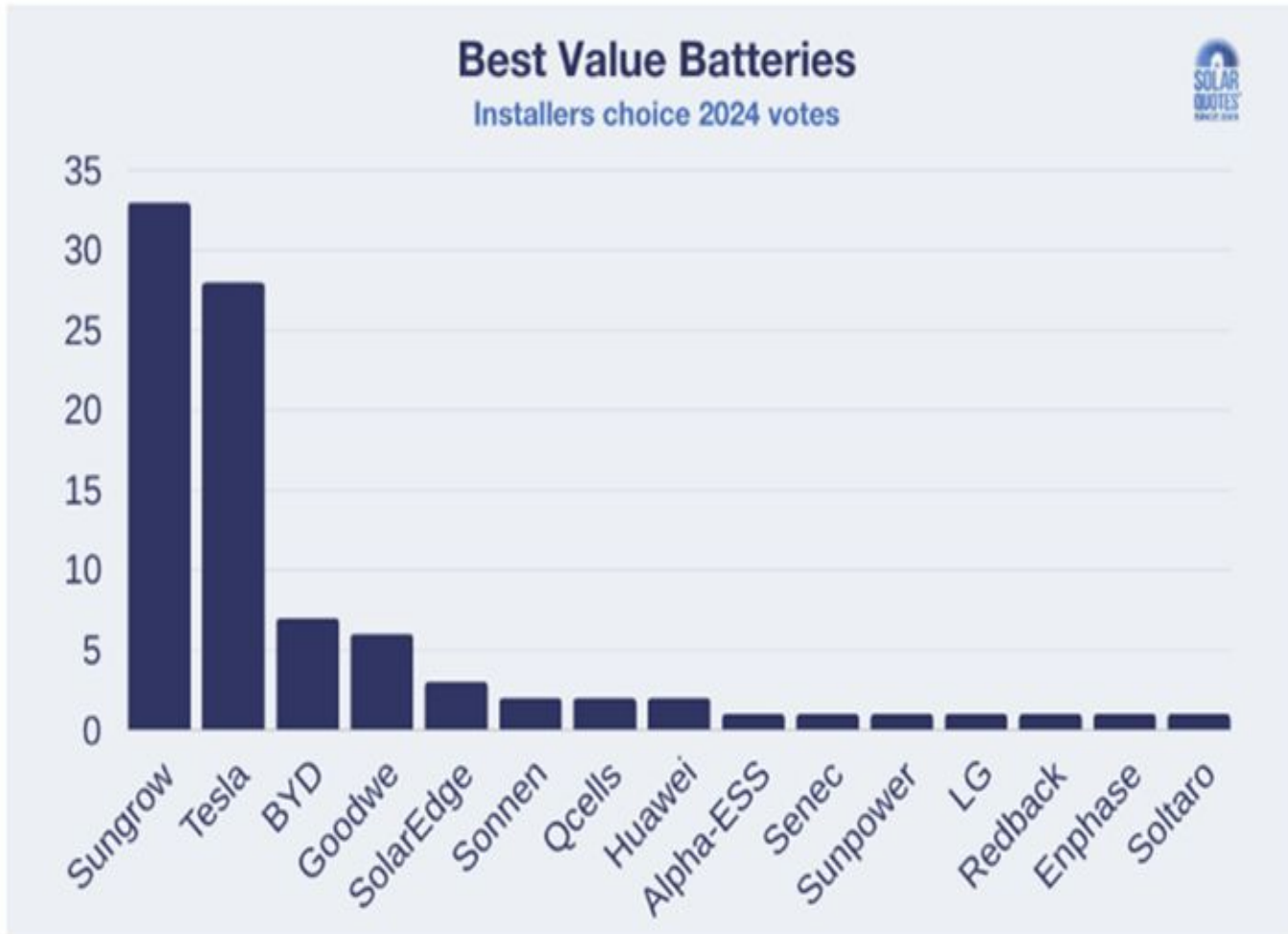


Earn Money

You can earn extra money by joining a Virtual Power Plant (read the fine print)

1st July 2025: The federal government will pay up to 30% rebate for household batteries

Possible Batteries



Installers choice (2024)

Best value: Sungrow; Tesla;
BYD

Best (Money no object):
Tesla; BYD; Sungrow /
Solaredge

Best support: Tesla;
Sungrow; Solaredge



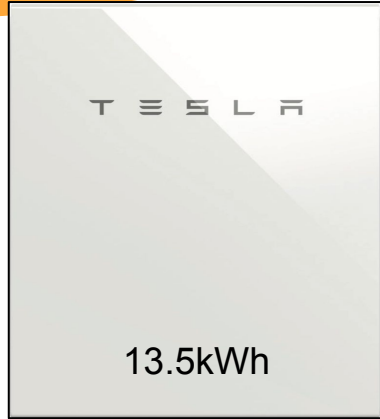
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Possible Batteries

AC batteries used if adding a battery to current Solar system.

DC can be chosen if installing solar and battery at the same time

Price range: \$1,000 to \$1,500 per kWh of storage



Tesla Powerwall 3

AC Coupled



Sonnen Evo

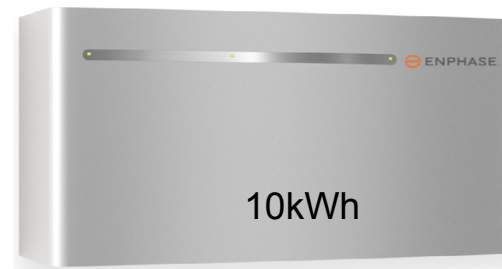


Alpha ESS Smile 5

DC Coupled



Sungrow



Enphase



Solaredge

How much could you save per year?

System size	Estimated kWh's produced p.a	Savings if utilise 40% of your solar	Savings if utilise 60% of your solar	Savings if utilise 85% of your solar, with battery
6.6kW system	9,600	\$1,450	\$1,900	\$2,300
10kW system	14,600	\$2,200	\$2,900	\$3,400

Indicative based on: 30c/kWh fixed tariff and 5c/kWh solar-feed-in tariff
In NSW, the "sun tax," officially known as a two-way solar tariff, will be implemented from July 1, 2025.

Here are 4 common ways to finance a solar / battery installation:

1. **Pay up-front**
2. Green loan (a low-interest loan from your bank or mortgage provider)
3. \$0 upfront loan through your solar / battery installer (read the fine-print)
4. Personal loan: this may have a higher interest rate than other options.

Solar - Example: CBA has a green loan at 3.99% ([CommBank Green Loan](#)).

Borrow \$5000 x 4% = \$50.60 monthly to payback over 10y

Possibly easily justifiable from energy savings, with cash flow matched

Solar is attractive, with a great return on investment and batteries are now more affordable with Fed. Gov't rebate

Rebates & Incentives

Solar

Batteries

Federal Gov't

Rebate offered up front, based on system's power generation, location and installation date. Rebate reducing each year. Expires in 2030.

Starts 1st July; 2025, around 30% rebate offered up front, must be VPP enabled; Battery size 5–100 kWh capacity (rebate applies only to the first 50 kWh of usable capacity)

NSW Gov't

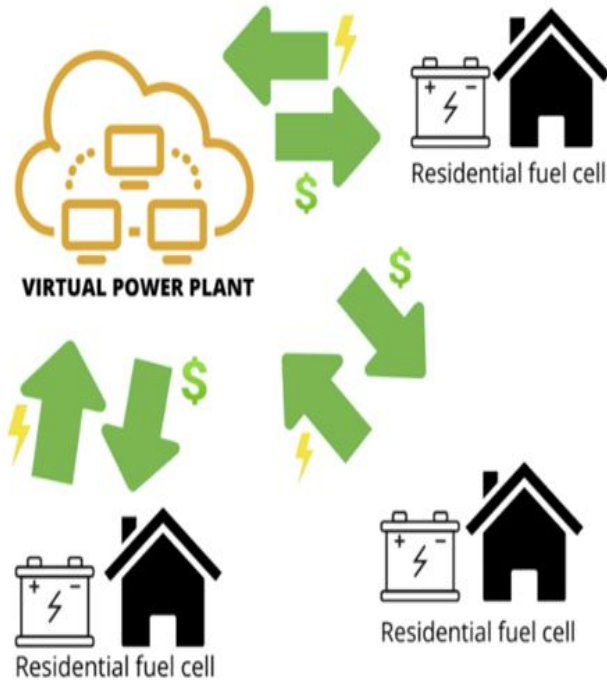
None

Sign up for VPP - e.g. Amber to get a one off payment. Depends on size of battery, 27kW \$1,500, 13.5 kW \$489.

Ku Ring Gai Council

Up to \$500 rebate on any combination of solar/battery

What is a VPP



Note: The most common source of revenue for a VPP is to sell power by discharging batteries at times of peak demand back to the grid.

PROs

- Feed-in tariffs may be higher
- Stability of the grid
- Potentially buy a battery through the VPP

CONS

- Some batteries not eligible
- Battery owners lose control of their batteries
- Not easy to understand the tariffs
- Shorten the life of your battery (more cycles)
- The battery may not have enough energy for your own use

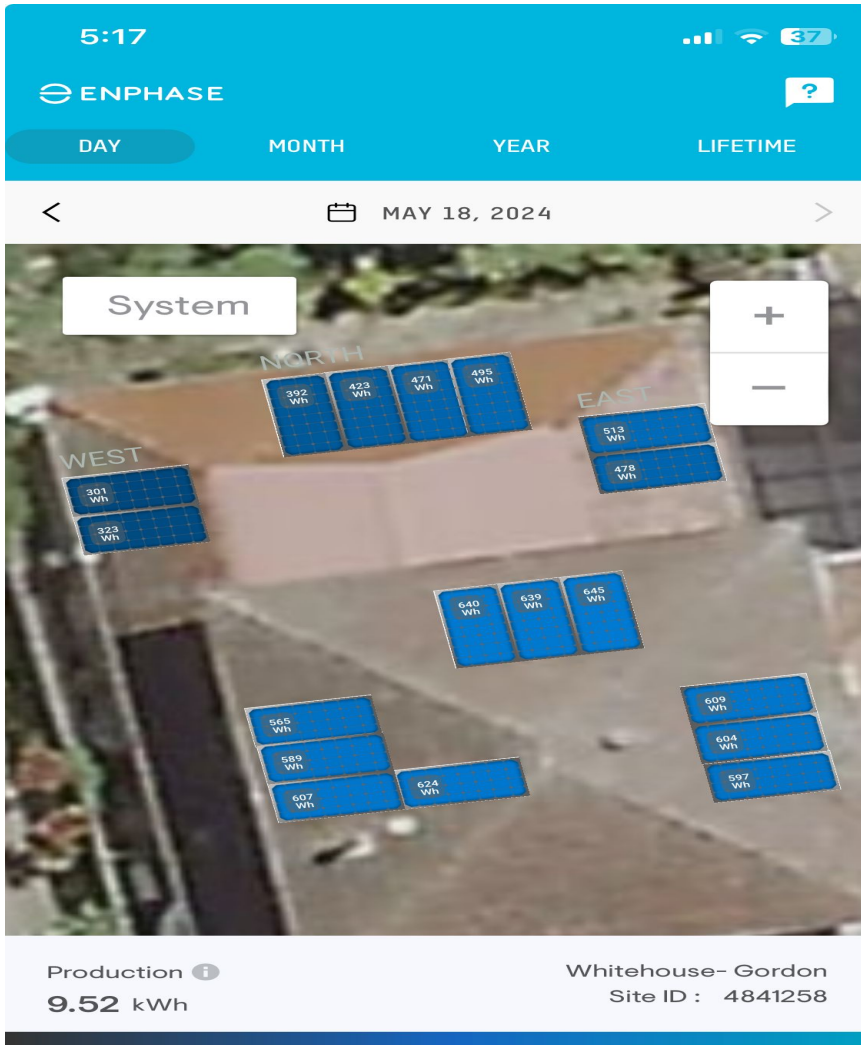
Amber as a VPP - better, but you have to be prepared to monitor

Which installer?

MOST IMPORTANT!!!!

- <https://saaustralia.com.au/accreditation-status-check/>
- Check out: www.solarquotes.com.au
- Well-established business with a good track record
- Local, for home consultation (not just online sales) and follow-ups
- High quality products, long product warranties & workmanship
- Recommendation from your network
- Look for good reviews on solar websites and product forums

Case study #1



2 storey house: 3 people
Installed solar and battery in Dec 2023.
Will replace gas hot water and gas cooktop in next few years.
2024 purchased EV and ducted air conditioning

- 18 x TRINA 440W panels, 7.92kW
- 18 x Enphase microinverters
- Tesla Powerwall 2, 13.5kWh of usable battery
- Cost \$24K (inc. GST) net of rebates.
- Estimate of **\$1,260 per kW** (solar component)
- *Installed in one day*

Case study #2

2 storey house: 2 people



- Solar panels 2017 on North facing roof. LG with optimisers and SMA inverter.
- Solar Panels 2023 as we got an EV. On E and W slopes. Sunpower and SMA inverter. Total of 8kW
- No battery yet, but looking to get one
- **What did I learn....**
- Think ahead – the more panels the better – it's much more cost effective
- Working with a trusted installer is well worth it (particularly for troubleshooting)
- Feed In tariffs not really worth it (only 1-5c/KW now)

Next Steps

1. Try SunSPOT, a Solar & Battery Calculator
2. Organise 2 or 3 quotes to compare propositions
3. Choose your solar / battery system
4. Decide how you will pay (e.g. direct or finance)
5. Pay deposit and schedule your installation
6. Get smart meter installed (if not already)
7. Switch to a solar friendly Retailer
8. Install solar/battery
9. Claim rebate
10. Monitor your usage
11. Consider VPP/Amber sign up
12. Switch to solar friendly supplier

There is now more of
an incentive to add a
battery
to your solar system

Q&A

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Thank you Zero Emissions Sydney North for supplying much of the content of this presentation,
plus significant technical support.

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