



8 Tips for Choosing a Solar & Battery Combo

Energy independence and lower bills

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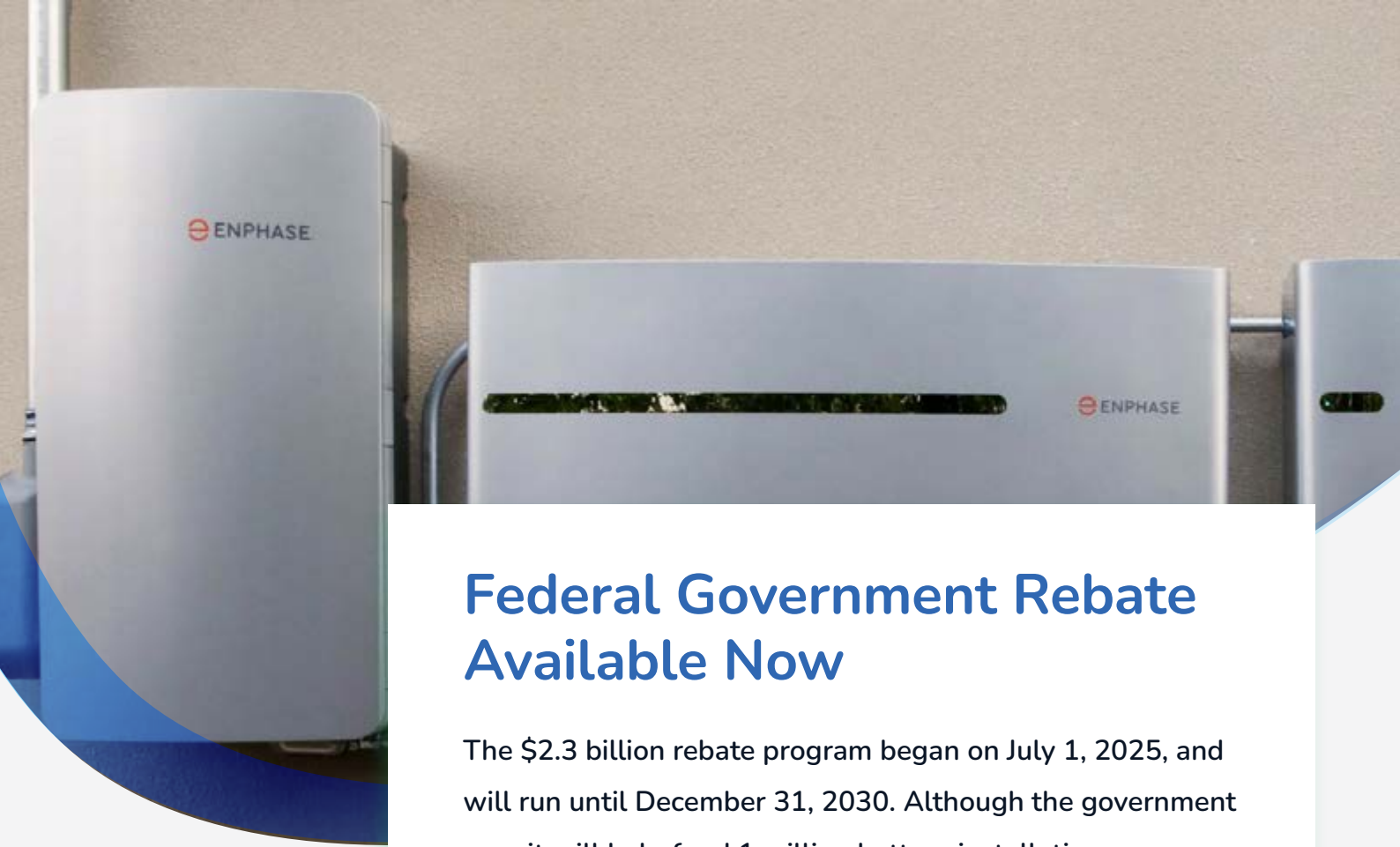
Solar & Batteries Info

Solar systems with batteries have become increasingly popular over recent years and are expected to become even more so going forward. We predict that a solar/battery combo will be a standard accessory to a residential home in the next year or two.

There are several key factors that should be considered when researching and purchasing a solar and battery system or adding a battery as a retrofit to an existing solar system.

TOP TIP

Cheap batteries are not a safe option. A lack of after-sales support and less advanced technology make these purchases a big headache in as little as 2 years. You have been warned - please do not waste the rebate.



Federal Government Rebate Available Now

The \$2.3 billion rebate program began on July 1, 2025, and will run until December 31, 2030. Although the government says it will help fund 1 million battery installations, many households are choosing larger systems, meaning only around 300,000 homes are likely to benefit. With over 4 million solar system owners across Australia, the rebate won't last - so act early.

Key Factors:

- **Rebate Amount:** Up to 30% quality battery costs. Around \$350 per useable kWh of battery storage. Will reduce year after year.
- **Typical Savings:** Around \$4,500 on a 13.5 kWh battery system.
- **Eligibility:** Households, businesses, and community facilities.
- **Battery Size:** 5-50 kWh useable capacity; must be VPP-capable (not necessarily connected).
- **No Income Test:** Available to all eligible property owners. Available for multiple properties for the one owner.

Things to Keep in Mind:

- The rebate is only available once per property - so do not buy cheap batteries, as they may not last longer than a few short years, and you will have wasted your money - and pay for its removal.
- Off-Grid*: Also applies to off-grid systems needing extra battery storage.
- Your property must have an existing or new rooftop solar system.
- Installation must be carried out by an accredited installer under the Small-scale Renewable Energy Scheme (SRES).
- It is predicted that funds will be depleted before the set date of December 31, 2030.
- The rebate could cut family power bills by \$800–\$2,300 a year when paired with solar and battery storage.
- The scheme has been established to stabilise a grid that is at risk of becoming less reliable.

*Must be more than 1km away from connection to the grid or cost more than \$30K to connect.



1



How do Batteries Work?

A solar home battery charges similarly to a car battery. A battery management system (BMS) ensures the charging voltage matches the battery's requirements and regulates the solar panel output to deliver the right amount of power.

As the battery charges, electrical energy is converted into chemical energy. When it discharges, that chemical energy is turned back into electricity.

This process isn't perfectly efficient - some energy is lost during conversion. On average, you can expect to get back about 92–97% of the energy you put in, with a typical loss of 3–8%.

Lithium Iron Phosphate (LiFePO₄) is the top choice for home battery storage today. It's a type of lithium-ion battery known for being safe, reliable, and long-lasting.

Unlike other types, LiFePO₄ batteries don't use cobalt, making them more ethical and environmentally friendly. Backed by major investment from the EV industry, this technology keeps getting better.

Most come with a 10+ year warranty, and for homeowners, it's currently the smartest and most trusted option for solar battery storage.

A close-up photograph of a white Enphase battery unit. The unit is rectangular and has the Enphase logo, which consists of a stylized orange 'e' inside a circle, followed by the word 'ENPHASE.' in a bold, sans-serif font. The background shows a brick wall and a wooden surface.

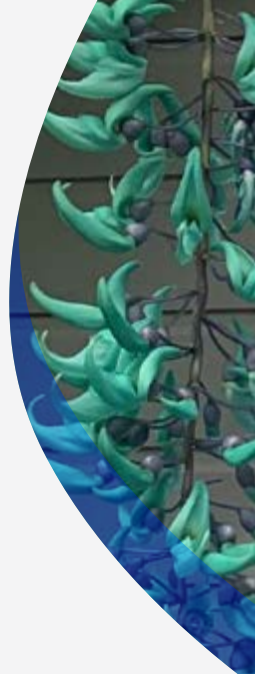
 ENPHASE.

2

Many Batteries are Modular

Many battery brands now offer modular systems, with units typically ranging from 5 to 10kWh. These allow for flexible system design and are often easier to transport and install.

Modular batteries are often promoted as “expandable” (a bit like adding more batteries in the future like Lego blocks), encouraging homeowners to start small and add more capacity later. However, there are a few important caveats, as listed on the next page.





- The Federal Battery Rebate is only available once per household. If you expand later, any added modules won't be covered and must be paid at full price.
- Battery models and chemistries evolve relatively quickly. In just a few years, manufacturers may move on to newer versions that could be incompatible - especially with lower-cost brands.
- This means your original system might not be expandable after all, leaving you stuck with limited storage.

To avoid these issues and maximise your rebate, it's best to size your battery correctly from the start - or even slightly oversize it to cover future needs.

TOP TIP

Getting an experienced, quality-focused, and knowledgeable system designer in the first place is very important. We can help you.

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Why get a Home Solar Storage Battery?

In the early years, like 2006 when solar had a 14-year payback, systems were only purchased by customers with a lot of disposable income for environmental reasons.

By 2008, the Howard Federal Government added an \$8000 rebate into the mix and the payback fell to 7 years. This is when solar took off. In addition, the introduction of generous State Feed-in-Tariffs made the switch to solar more popular.

Purchase motivation from then on was mainly financial as further solar equipment price reductions meant increased Return on Investment (ROI). Now that there is a Federal Battery Rebate, we would expect the battery uptake to follow a similar path.



Today, a solar-system-only ROI can be as low as 3-4 years, even for top-of-the-range quality solar equipment. A 20-year-plus lifespan for quality solar means significant financial benefits of \$30,000, and as much as \$50,000 for a 10 kW solar system over its lifespan. Nowadays, many customers opt for a Solar & Battery combo.

The key reasons for purchasing a battery vary, from energy independence and a dislike of the energy retailers, to fear of blackouts and the desire for long-term financial returns.

TOP TIP

Be clear about why you're considering a solar and battery system when you communicate with potential installation companies. This helps ensure your needs are well understood, enabling the installer to design the most effective solution for you.

The Benefits of a Battery

With the new Federal Rebate, many home batteries now pay for themselves in under 5 years—especially when bundled with solar, an EV charger, and a heat pump. Most new installs are expected to include batteries.

Here are the key benefits.

✓ **Blackout protection**

If you have regular blackouts or feel there is a risk of blackouts, you may install a battery to power at least essential appliances from the battery when you lose grid power. For example, if you reside in a bushfire-prone zone or remote area and your battery will power your water pump, charge the phone and essential loads, the battery could make a big difference in such an emergency.

✓ **Self-sufficiency and Lower Power Bills**

Many people add batteries to use more of their own solar power and save even more on their power bills—beyond what solar panels alone can offer. If you export excess energy at low feed-in rates, a battery lets you store and use that power later, like at night or during peak times. This reduces your reliance on the grid and increases your energy independence.



✓ **A new home deserves a solar & battery combo**

- If you're building an energy-efficient home, adding a solar and battery combo is highly recommended. Planning for this early on allows you to integrate the necessary cabling into the design, avoiding unsightly add-ons or external conduits later.
- When designing your home, align your roof to maximise sunlight for optimal solar generation. Avoid designs with too many ridges or gables, as they can cast shadows and reduce solar output.
- For the best results, aim for a relatively flat roof with an angle of 10-25 degrees, facing North, North-East, or North-West. This will ensure the most effective solar energy production, particularly in the afternoon.

✓ **Forward thinking purchasers just love new technology.**

Some people install batteries because they love the technology and are early adopters and thought leaders. They have recognised that solar with batteries, EV vehicles, and the reduction of gas as a heating and cooking source will be part of the lower CO₂-generating energy footprint of the future.

What is the Financial Reality?

A solar and battery combo is financially more advantageous when purchased together, offering a lower return on investment (ROI) compared to adding a battery to an existing solar system.

For example, with quality solar alone, you can typically achieve a 3-4 year ROI. If you add a battery to an existing solar system, the ROI is usually around 5 plus years. However, nowadays thanks to Virtual Power Plants (VPPs) and electric vehicles (EVs), this ROI can be reduced even further.

A quality solar and battery setup (without VPP or EV charging) typically offers a 5-year ROI, depending on battery size. While cheaper batteries may seem appealing, we strongly advise against them - they can become costly liabilities and even pose safety risks if poorly installed.

Adding a VPP or EV charger to your solar and battery setup can significantly boost savings. When you combine solar and battery use with the fuel savings from driving an EV, the payback period can drop to as little as 3.9 years.



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How much can I save with my Battery?

A home battery helps you save by storing excess solar power for use at night, on rainy days, or during peak demand—reducing the electricity you need to buy.

Your savings come from avoiding retail power rates (usually 30–45c/kWh), minus what you'd earn from a low feed-in tariff if you exported that energy instead.

Earn with Your Battery Through a VPP

With a Virtual Power Plant (VPP) like Amber (if available in your area), your battery can earn extra income. During high-price events - where energy prices can spike - the VPP can sell your stored power.





If your 14kWh battery has 13kWh of usable energy and you cycle it once per day, you'd save about \$4.55 daily ($13\text{kWh} \times 35\text{c}$). Since many batteries can cycle more than once per day, we estimate \$7/day could be your maximum savings. Therefore, the maximum potential benefit for your battery could be around \$2,500 per annum (in ideal circumstances).

Add up to \$1,000 in VPP earnings annually, plus extra benefits like blackout protection and using solar power to charge your EV, and a battery becomes a smart investment.

Considering a Battery Purchase?

With electricity prices predicted to rise by another 50% in the coming years, ROI on batteries may improve even more.

At Excel Power, we provide tailored solar and battery solutions. In areas with high power costs, our systems can achieve payback in just over 5 years—see the calculation table on the next page.

Actual savings vary based on your tariff, energy usage, and whether you join a Virtual Power Plant (VPP). Speak with our team for a personalised quote and ROI calculation.



Here is one specific sample using top-of-the-range equipment ¹:



Item	Size	Est Purchase & Installation Costs	Est Annual Benefit ¹
Solar System	12kW	\$13,000 (after Fed. Rebate)	\$2,800
Battery	14kWh	\$10,000 (after Fed. Rebate)	\$1,500
EV Charging	20,000km travel pa	\$2,000 (for Charger- 1 off cost)	\$2,100 ²
Total		\$25,000	\$6,400
ROI ³ with 0 EV			5.3 years
ROI with 1 EV			3.9 years

1. This is a rough calculation only, as prices vary depending on installed brands and local energy prices.

2. Assumes owner uses 75% of EV electricity consumed via solar/battery, the rest is paid for.

3. The Solar & Battery ROI can be further reduced via participating in a VPP or other State-based incentives which are not included in this calculation.

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Don't Risk a Cheap Battery: What to Know Before You Buy

Home batteries can be complex and often cost a bit more for good quality—but you usually get what you pay for. That doesn't mean you need a Tesla Powerwall. Brands like Sigenergy, Franklin WH, PowerPlus, and Enphase also offer great options. Many now have different sizes and prices to suit a range of homes and budgets.

TOP TIP

When it comes to batteries, and solar in general, buying cheap brings many risks. As you get the Federal Battery Rebate only once, do not waste it onto a cheap short-lived battery.



Poorly made batteries can overheat, lose performance, or worse. Choosing a cheap battery with little or no after-sales support often leads to costly problems - and long-term regret.

Consider multiple system design options and ensure that you receive a top-quality long-lasting solution at a price in your budget range.

Remember that a battery is not a set-and-forget purchase and needs to be supported with a quality monitoring system and the back-up service and support of the manufacturer if required.

So, when deciding on the battery, look for local Australian services and support, and a local installer that is located near you and has been in the business for a decade or more. That way, you know that the chances for quality after service is much higher than for solar sales companies that rebirths every few years.



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Is It Worth Waiting for Battery Prices to Drop?

The answer is a **clear no** - waiting is unlikely to help. Over the past four years, battery prices haven't dropped as much as expected; in fact, some models have gone up.

With the Federal Battery Rebate decreasing each year (and concluding in 2030), the earlier you buy, the more you'll save.

Home batteries are also essential for grid stability. While over 4 million Australian homes have solar, only around 200,000 have batteries. Due to the rebate, demand is growing fast.

Solar panels and inverters have dropped in price over the past decade, largely due to increased production. The idea has been that doubling production cuts costs by 20% or more. But that hasn't happened with home batteries - why?

Both EVs and home batteries rely heavily on lithium. As global EV production has surged, demand for lithium has outpaced supply, keeping prices high - even with new lithium mines coming online.

These supply pressures are expected to continue for several more years, so a major drop in home battery prices isn't likely anytime soon.

That said, the new federal rebate brings battery prices to historic lows - making now one of the best times to buy.





Excel Power follows all the important guidance given in this guide.

Contact us for free advice or an obligation free quote.

 (07) 4638 7366

 excelpower.com.au

 5 Tointon St, Toowoomba QLD, 4350

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