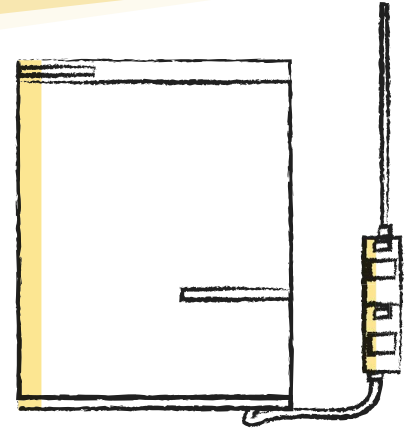


FACT SHEET

Home Battery



Snapshot

Emissions Saved	High
Lifetime	5 – 15 years
Average upfront cost (before rebates)	\$10,000 - \$15,000
Potential bill savings*	\$11,500 over 15 years (\$700/year)
Rebates available	Yes (TAS, VIC, ACT, NSW)
Difficulty of installation	Medium
Electrical upgrade required	No
Installers	Solar Installer

Assumptions: Battery price \$1,200 kWh installed. Lifetime 15 years with accelerating degradation to 60%. Finance at 5.5% over 15 years. Assumes home has solar that can feed into the battery, in that these savings are additional savings that can be provided from a battery to a home that has solar. Assumes 50% of grid energy taken comes at a lower rate (e.g. nightly) which is 33% lower than average volume electricity rate. Does not account for the battery doing other services, peak exporting, or arbitrage on the market, which we would expect to increase savings further.

Introduction

Battery storage, from household to utility-scale batteries and within electric vehicles, is a game changer in the energy transition. We already know how Australia's cheap and abundant solar resources have unlocked millions of savings for households and businesses, and reduced our carbon emissions. But to get the full value of our solar resources, we need to capture and store it to be used when the sun isn't shining. With the cost of batteries falling and the performance of the technology rapidly improving, getting a battery could be the key piece to untether yourself from fossil fuels. Whether you're aiming to save money on electricity bills, minimise your carbon footprint, or prepare for emergencies, now is the time to consider investing in a home battery.

Why choose a home battery?



Reduce running costs - Reducing the energy you import from the grid, especially during the peak tariff periods (eg. 5-9pm) when there is high demand on the grid, could slash your energy bills by around \$700 every year.



They're great for our climate - Maximise renewable energy resources by storing it for use at night time or low solar production ensures a dramatic reduction in household emissions.



Be resilient - Whether it's to use energy during blackouts or extreme weather events, batteries can provide you with power when there is a grid outage.



They're important for our energy transition - With solar and battery storage, households are a key part of our energy infrastructure. They can lower peak demand, add security during blackouts and reduce the need for expensive large-scale infrastructure.

What to consider



Compatibility - If you are buying solar at the same time, opt for an inverter that is compatible with both systems. If you have an existing solar system, depending on your current inverter, you may need to purchase a new one.



Battery location - You have to follow Australian Standards as to where they can be placed, which will be known by your installer, for instance you can't have them within 600mm of a window or under a floor.



Your location - The amount of sunlight hours will affect charging rates. If you live in a cooler climate you most likely will need a larger battery as your solar production will be lower. If you live in a hot climate, make sure the battery is shaded so as not to overheat.



Controllability - Consider choosing a battery that can be easily controlled by yourself or can be automated to charge and discharge to maximise its use.



Battery chemistry - While lead-acid batteries used to be popular especially in remote areas, the most widely available home batteries use lithium-ion chemistry (similar to the batteries in laptops and mobiles) because they are more efficient and have higher power for weight/volume. There are sub-types of lithium ion batteries with variations in efficiency and capacity so it's best to discuss with your installer. Nickel-iron or flow batteries can't compete on performance and price; while sodium-ion batteries also can't currently but may do so in a few years.



Capacity - To determine battery size calculate your electricity usage and power of appliances, aiming to cover energy consumption during peak grid times (eg. 5-9pm). Also factor in future usage, such as replacing gas appliances with electric ones. One day we will all have big batteries on wheels parked in our driveway (electric vehicles) that can power our home, but this may be a way off for many yet.

Tip

Some states offer feed-in tariffs for surplus energy exported to the grid, further incentivising battery storage.

Getting It Installed

1

Research.

You may want to use calculators such as an online solar calculator, entering in details like your postcode and energy bills to get a sense of tailored battery options and potential costs and savings.



2

Assessment and Quotes.

Consult with a qualified solar and battery installer to assess your energy needs and site suitability. The Clean Energy Council has approved installers that meet high standards of product and service. Receive detailed quotes outlining the system recommendation, cost of the battery system, installation, and any additional components.



3

Install.

Installation usually takes 1-2 days. Schedule the installation with your preferred certified installer who will integrate the battery with your existing solar PV system and electrical infrastructure.



4

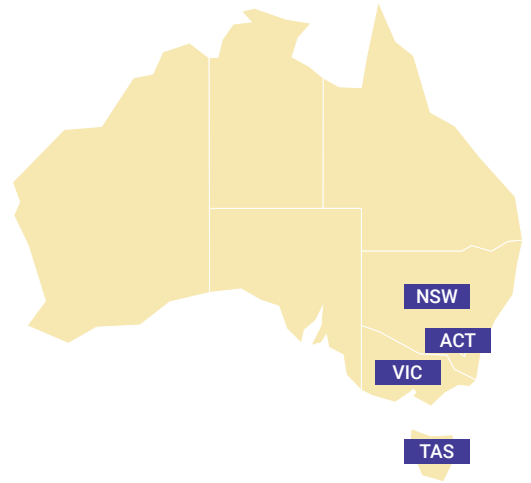
Monitor.

Your system may have settings you can adjust to maximise your usage, such as certain times of the day you want to change and discharge the battery. A good monitoring system will assist this decision making process.



Government Assistance

National Under the federal government's Household Energy Upgrades Fund you may be eligible to apply for a loan with discounted finance to afford the installation of appliances.



ACT **Sustainable Households Scheme** homeowners, including landlords, are eligible for a zero-interest loan of up to \$15,000.

TAS **Energy Saver Loan Scheme.** Interest-free loans are available to help Tasmanian individuals and small businesses access energy efficient products including batteries.

NSW **The Peak Demand Reduction Scheme** offers rebates from \$1600-2500 offered for household batteries

VIC **Solar Homes** program offers an interest free loan of up to \$8800 for batteries.

Rebates current as of September 2024. Check energy.gov.au for latest updates.

Renters

Unfortunately, asking for a battery from your landlord is challenging. Our advice is to first pitch having solar panels installed as the return on investment is just 3-5 years on average, making it an easier sale. Join advocacy campaigns, such as with Rewiring Australia, which is calling for governments to do more to make electrification accessible for renters, including solar and batteries.



In the meantime, there are some portable backup batteries available that may be worth exploring for grid outages. Renters without solar and batteries can still benefit from choosing energy retailers that offer solar soaker style tariffs which make energy cheap in the middle of the day.

FAQ



Is it worth getting a battery now?

It depends what your motivations are. It's a firm 'yes' if you are keen to reduce your household emissions, improve your energy resilience and create an all electric home. If you are primarily concerned by the return on investment, unlike solar (which is a slam dunk for most homes today), batteries aren't a clear call just yet, but those economics are improving every day. It may well make financial sense if you are on a high Time Of Use tariff or can join a battery program, like offered by wholesale electricity provider [Amber](#).

How do I make the most of it?

- Implement smart energy management systems that monitor and control the charging and discharging of your solar battery. These systems can enhance efficiency and prolong battery life.
- To maximise savings, avoid buying electricity from the grid at peak times so time battery utilisation then.
- Many batteries work best if only discharged to 80%, rather than full 100%
- Consider a wholesale market plan (eg Amber) that can match your battery usage with grid fluctuations.

Are home batteries safe?

Yes. Australia has strict standards that apply to batteries including the location and installation. If these are followed, the risk of fires are very low.

Can batteries be recycled?

Yes! 95% of a Lithium battery has the potential to be recycled and second life battery manufacturing occurs here in Australia.

What about going off grid?

If you want to completely go off grid you will need a very large solar and battery system to cover all your energy needs and you can face particular challenges such as town planning regulations. There are a lot of benefits for most Australians remaining connected to a grid system, so we are not advocating that homes look to go off grid, but having solar and a battery ensures you have more resilience, control and independence whilst grid connected.

Can you have a battery in strata properties?

Like solar, batteries can be a more complicated process for strata owners but still achievable and there are products available such as Allume's Solshare which helps split battery usage for individual homes.

What finance options are available?

Besides government rebates, there are private finance options available that may help you afford the upfront cost. Please note we do not endorse any of these options, and suggest you always consult a financial advisor. Here are some current options available:

- **No Interest Loan Scheme**, a federal government program administered by Good Shepherd for low income households
- Green loan finance offers from lenders such as **Brighte, Plenti, CommBank, Bank Australia**.

Useful Resources



→ **Solar Quotes**

[The Good Solar Guide](#)

→ **Solar Choice**

solarchoice.net.au

→ **Your Home**

yourhome.gov.au/energy

→ **Wattblock**

Advice for strata properties

wattblock.com/batteries

→ **Clean Energy Council**

List of approved batteries and best practice guide

cleanenergycouncil.org.au/industry-programs/products-program/batteries



About Rewiring Australia

Rewiring Australia is a non-profit, independent, non-partisan organisation dedicated to representing the people, households and communities in the energy system.

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