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## MY MONEY

# Can a home battery system help you save on energy bills?



By **Tom Watson**

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## A record number of Australians installed battery systems last year. So what are the costs involved and how are governments making them more affordable for households?

Erin Hilton is no stranger to household solar. She's worked in the renewable energy industry for eight years and has had solar systems installed at two former properties.

So when she and her family decided to make the move to the New South Wales north coast a few years ago, finding a home that was optimised for [solar](#) was a major consideration.



"We moved to Coffs Harbour during the pandemic and when we were looking at houses to buy my husband would be looking at the shed space and I'd be looking at the roof orientation," Hilton says.

Unlike her previous homes though, Erin crunched the numbers and worked out that, this time, it made sense to install a home battery system along with rooftop solar.

"I had watched the financials evolve over the last few years. Energy prices have increased and solar feed-in tariffs have fallen, so for us it made sense to do it in one hit from day dot and go down the self-consumption path rather than exporting energy [back to the grid]."

Ultimately, the family opted for 8.8 kilowatts worth of solar on the roof of their home and a 12.6 kilowatt-hour battery system to store that energy.

Looking back, Erin thinks that the move was a no-brainer - especially given that it's allowed the family of four to generate, store and consume a relatively large amount of energy for a significantly lower cost than they would be paying otherwise.

"We pay about \$60 a month now. If we didn't have the system, we'd probably be looking at \$1200 to \$1500 a quarter easily with our usage, because we've got an EV [electric vehicle], a pool, a spa, electric hot water and two air conditioners - we're not shy about using energy.

"The way I've always looked at it is that you can't do anything about interest rates or council rates and costs like that, but you can do something about your energy. Energy is something you can actually



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take control of and it's a recurring bill, so it sort of pays for itself."



## Growing demand for batteries

Erin and her family are just one of a growing number of Australian households investing in battery storage systems for their homes.

Between 2015 and 2023, research from solar consultancy firm SunWiz found that over 250,000 residential battery storage systems were installed in Australia. And 2023 was the busiest year of all, with a record 57,000 systems installed.

So what's drawing households to complement their [existing solar systems](#) with battery storage?

"The really big deal right now is to save money. Electricity bills have gone up, so the big motivator for people is the potential cost savings and the fact that those can be almost immediate," says David Sedighi, chief operating officer at battery storage system provider, VoltX Energy.

"So cost savings is the main one, but there are also a lot of sub-factors to installing a battery: the energy independence you can get, the environmental impact and potential increases to property value."

Sedighi says that falling feed-in tariffs and the introduction of a so-called 'sun tax' have also helped pique interest in batteries among households with existing solar systems.

In years gone by, homeowners with solar have been able to provide the excess power generated by their panels back to the grid in exchange for a credit on their [electricity bills](#) from their provider. These payments are known as feed-in tariffs, but they've become less lucrative over time.

"There's been such an uptake of solar that the grid doesn't really want that electricity from households anymore. There's too much of an oversupply when the sun is providing peak power for solar, which is why tariff rates have kept dropping," Sedighi explains.

"Now it's reached a stage where Ausgrid and some others are going to apply their own tariff to customers who provide electricity back into the grid."

## Battery costs and government incentives

The reality is that installing solar and battery systems isn't cheap. Hilton, for instance, says that she paid around \$22,000 for the setup at her home.

Looking at the cost of battery systems alone, an analysis conducted by

SolarQuotes at the start of the year found that households can expect to pay anywhere between \$8750 and \$15,500 for some of the most popular batteries on the market.

Sedighi says that the price of some of these existing products was one of the reasons behind VoltX Energy's decision to expand its own product range - which had largely been focused on recreational batteries - to also include household battery systems.

"At a time when some other home batteries are around \$15,000, we've launched an equivalent product for \$7500," he says.

There are a number of government-led initiatives across the country aimed at helping households manage the costs of installing a battery though.

In New South Wales, for instance, the state government is [rolling out a new scheme](#) from November 1 which will give eligible households the opportunity to save between \$1600 and \$2400 on the up-front cost of a installing a battery.

From interest-free loans to one-off grants, here's a rundown of the support that state and territory governments are currently offering.

### What financial support is available to install a home battery?

State/territory	Scheme	Details
Australian Capital Territory	Sustainable Household Scheme	Eligible households can take out interest-free loans up to \$15,000 which can be used to help fund energy-efficient products such as home battery systems.
New South Wales	Peak Demand Reduction Scheme	From November 1, the NSW government is offering incentives which could take \$1600 to \$2400 off of the cost of installing a battery system for eligible homeowners who already have solar.
Northern Territory	Home and Business Battery Scheme	Northern Territory homeowners can apply for a grant (up to a maximum \$5000) to go towards the cost of purchasing and installing a home battery system.
Tasmania	Energy Saver Loan Scheme	Eligible homeowners can take out interest-free loans of up to \$10,000 which can be used to purchase energy-efficient products like home batteries.
Victoria	Solar Homes Program	Victorian households can apply for interest-free loans of up to \$8800 for the installation of a solar battery system. There are a limited number of spots available and a range of eligibility criteria.

Source: Varied. Information accurate as of October 2, 2024. See individual state and territory government websites for full details and eligibility criteria.

### Will a battery make financial sense for every household?

Even with some of the government incentives available, households are still going to be looking at a price tag in the thousands or low tens of thousands to install a battery. So from a purely financial perspective, how can they work out if the investment is worthwhile?

This is when the question of payback periods comes into the equation. In essence, this is the time it will take a household to cover the upfront costs of a battery through the amount of money they're able to save on their regular power bills with the help of the battery.

Hilton, for one, has worked out that her entire system has a payback period of around 4.5 years, while Sedighi says that some people may be able to recoup their initial costs in just two or three years.

It may take some households [over a decade](#) to cover their upfront investment though, according to the Department of Energy, at which point the battery may be outside of its warranty period (which is generally 10 years).

Sedighi says that this doesn't necessarily mean the battery won't be functional though.

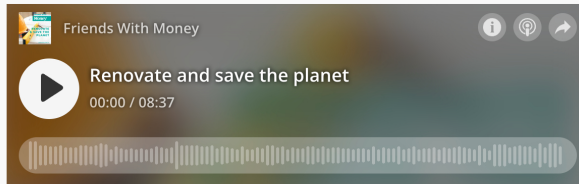
"A 10-year warranty does not mean the battery stops working after 10 years - it just means that it will have potentially degraded. Most of the capacity of the battery is still usable after 10 years though, so you don't throw it away, you continue using it."

For those with existing solar systems who are curious to find out how much they could potentially benefit from installing a battery system,

the federal government and the University of New South Wales have partnered to create a [solar and battery calculator](#).

Otherwise for more inspiration on improving your home's efficiency, check out our article on [affordable renovations for an energy efficient home](#).

*Correction: An earlier version of the story stated that Hilton would be paying \$1200 to \$1500 a month without her solar and battery system. The correct timeframe is per quarter.*



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**Tom Watson**

Tom Watson is a senior journalist at [Money magazine](#), and one of the hosts of the [Friends With Money podcast](#). He's previously worked as a journalist covering everything from property and consumer banking to financial technology. Tom has a Bachelor of Communication (Journalism) from the University of Technology, Sydney.

## Comments

**Avalon Ng** October 5, 2024 10:53am

Who is to pay to remove the battery once it reaches its end of life and how much?

[Reply](#)

**JOHN WHITE** October 5, 2024 11:46am

I do not understand the numbers in the article. a 10 kw solar system will produce 40 kw a day. So at 60 c a kw maximum savings of \$24 a day so MAXIMUM \$750 a month. How can an 8.8 kw system save \$1200 to \$1500 a month. Can an article with accurate information be presented.

[Reply](#)

**Nigel Griffin** October 7, 2024 10:16am

Totally agree the numbers are Soooo fictitious they are ludicrous

and to most they wont understand how to calculate them accurately and think wow what a saving

[Reply](#)

**Harry Snape** October 5, 2024 8:33pm

How about some actual real numbers.

Let's sav vou bought vour 12.6kWh batterv for \$10k. Let's sav vou dav 50c a kWh.

Even if you cycle the battery every single day and only use the power to replace peak usage (totally unrealistic) the most you would save is \$6.30 a day (in reality you'd lose 12.6h of FIT and the power would likely be used for cheaper shoulder and off peak usage) . The maximum gross benefit is \$2239 a year, ie. less than \$200 a month. When you factor in cost of capital (at least \$660 a year), FIT loss of 70c a day, pay back is over 7 years.

If you don't use all 12.6kWh or you are only replacing shoulder or off peak usage the savings collapse and pay back balloons beyond the battery warranty period.

The heavy lifting for ant savings is the solar installation. Even then the claim that they are reducing a \$1500 a month bill to \$60 is ludicrous. An 8.8kW system would produce around 1200kWh a month assuming 5x per day and sunny every day which is unrealistic. Even then the maximum saving is \$600 assuming a very high 50c a kWh and would require the house to be using all that 8kW generation internally.

So none of the claims are remotely plausible

 [Reply](#)

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**Ian Blayney** October 6, 2024 4:08pm

Tried the solar panel /battery calculator.

Got towards the end of the exercise and it froze.

Very frustrating. Wondered if this is the one the Federal Government is using?

 [Reply](#)

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**Nigel Griffin** October 7, 2024 10:19am

The numbers are completely false and fabricated, simple math throws them out the window surely the writer of the article does some checks to ensure accuracy instead of trying pull wool over the consumers eyes that batteries are not financially viable and the only reason people have them is for power security or they were duped into thinking they would pay for themselves

 [Reply](#)

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**Erin Hilton** October 8, 2024 10:40am

Just for the comments saying these savings are "ludicrous"

Let me take you through my billing

I'm on a special EV plan with the following breakdown

00:00-06:00 @ \$0.08 /kWh - I charge by batteries in this window.

06:00-11:00 @ \$0.56/kWh

11:00- 14:00 @ \$0.00 (yep that's right it's free here!) so I schedule my car, spa, pool to all run in this period and for my batteries to be 100% SOC come 2:00pm.

14:00-00:00 @ \$0.56

My FIT is \$0.03 - so instead of exporting my energy to the grid I use it!

With products like @CATCHPower I divert surplus energy to my hot water system and control when other large loads like air con, EV and Spa run, so these loads only run from surplus solar or when the energy is free.

My batteries cycle 2.5 times a day, I schedule them not to discharge when the energy is free and instead make sure they are 100% charged in the free period and again when the energy is only \$0.08/kWh.

The true value of solar is self consumption and having the tools to make it work for you.

 [Reply](#)

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**Harry Snape** October 8, 2024 3:28pm

A BYD home battery warranty is for the lesser of a number of key attributes of a battery. One of them is total energy throughout from the battery. Their warranty averages out to 10 years of a single daily cycle inclusive of the estimated deterioration of the battery over that period. Ie. it's more like 8.5 years at full capacity cycled daily.

If you are cycling twice a day you have halved your warranty coverage.

 [Reply](#)

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**Richard Bulman** December 28, 2024 12:32pm

Article has been written by a biased person without a grasp of mathematics. The

battery is never paid off in this example. In the future as Labor bent on un-reliables continues and the tariffs continue to skyrocket plus supply charges (and solar tariffs that have sneaked in) and the feed in tariff shrinks towards zero: then batteries at half the price may prove viable.

However, just be reminded that we tax payers are subsidizing these systems in the order of 50% so the entire business is a sham.

 [Reply](#)

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**John Langan** December 28, 2024 5:18pm

I ran several scenarios of our power consumption, then asked for a suggestion for number of panels - as if by magic the exact same answer came back regardless of what I'd said. Also magically I would pay a little more for having solar than I currently do by not having it, and my "savings" are in the thousands per year. It all seemed like a good idea, unless I took time to think about the rubbish answers this calculator throws out. If you think about the actual numbers this is complete bull

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