SolarCitizens

Calculating Household Savings under the Cheaper Home Batteries Program

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Overview

The Australian Labor Party has proposed the $2.3 billion Cheaper Home Batteries Program during the 2025 federal election campaign. This paper calculates the expected household savings that would be delivered under this policy.

The Program is proposed to directly benefit household energy bills during the current cost-of-living crisis by making battery storage more affordable and helping households save significantly on their electricity costs. Once implemented from July 2025, the program's subsidy will offer a 30% up-front discount off the cost of a battery and will be delivered through the same government scheme - Small-scale Renewable Energy Scheme (SRES) - that has helped millions of Australian households install rooftop solar.

Household batteries reduce electricity bills by charging when energy is cheap during times of high solar output, discharging when the sun descends and domestic energy demand rises, and exporting to the grid when it is otherwise expensive.

This shift in energy usage not only reduces household energy bills but also gives households control over when and how they use electricity, thanks to extended storage. Boosting the number of batteries installed in Australian households will also deliver benefits to the broader electricity grid by soaking up excess solar that floods supply during the middle of the day and shifting it further into the evening peaks.

The Australian Energy Market Operator has modelled, in the Integrated System Plan, that 8GW of behind-the-meter energy storage is required by 2030 to keep energy bills low.[1] This is roughly equivalent to one million household batteries, which has been the target advocated for by Solar Citizens, and is in line with the rate of installations expected for the Cheaper Home Batteries Program.[2]

Owning a battery is a reliable way to bring down household energy bills now and in the future. The Cheaper Home Batteries program would make it easier to own a battery and would provide extended energy bill savings over time. The analysis presented in this paper finds that with the Cheaper Home Batteries program in place, household investment in batteries will pay for themselves within five years, and deliver net savings of up to $14,000 over the 10-year deemed lifetime of the battery.

Net savings Australians can expect through participation in the Cheaper Home Batteries Program

Australian households have varying levels of electricity use, known as their load profile, based on the energy efficiency of their property, the number of inhabitants and energy usage patterns.

Typically, the load profile of a house with 4-5 people has a small peak in the morning as electric appliances are used, a lull during the middle of the day while members of the household are at school or work, and then a large peak in the evening as the sun sets and dinner is made, dishes are washed, laundry is done and air conditioning is turned on, before dropping again overnight.

The evening spike in electricity demand is known as peak demand, and as solar power drops at both the household and utility level there is additional energy needed to cover this period, which leads to wholesale electricity price spikes. Time of Use (TOU) electricity pricing plans for households are being increasingly adopted to follow the wholesale pricing flows and reward consumers for using power while it is cheaper and to reduce use during peak demand.

Solar systems have proven an invaluable investment for an Australian household looking to reduce their power bills, with just a 6.6kW system saving a family over $1,300 a year. With the cost of solar panels falling rapidly over the last 20 years, solar systems have reached the point where they are paying themselves off within 2-5 years.

Almost four million households already benefit from rooftop solar, with installation rates continuing to climb.

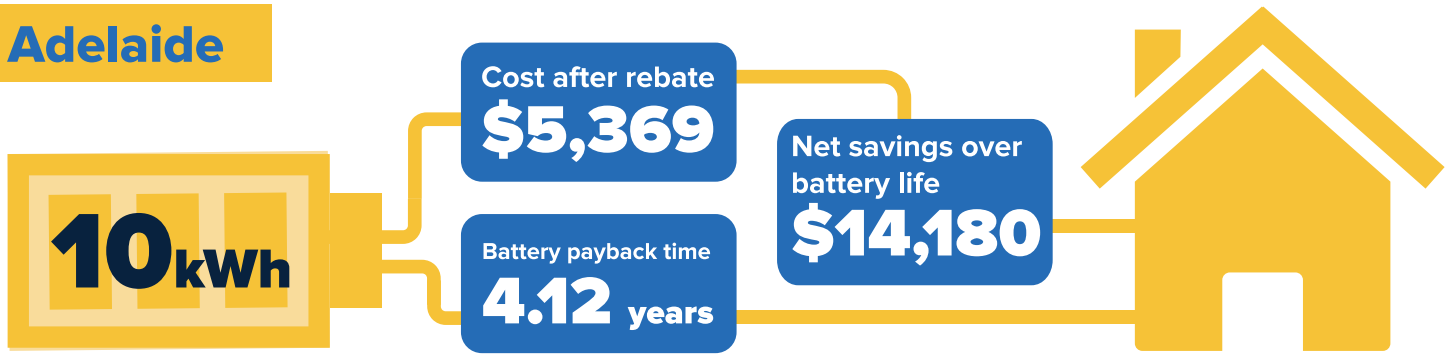
Solar batteries are the natural next step to achieving power savings for families. In Sydney, a 6.6kW system produces around 26kWh of power per day (averaged over the year), but a family of 4 uses only around 20kWh of power per day and—with around half of that use happening outside daylight hours. Feed-in tariffs (FIT) for solar-generated electricity being put back into the grid sit at just 3-6c per kWh, depending on your location. When compared to evening peak power prices of 36-65c per kWh, there is a clear incentive to time-shift your free solar power until the evening when it is needed. This is where batteries come in.

There are many batteries available on the market, with the biggest differentiating factor being the usable storage capacity, measured in kWh. For this analysis, we have chosen a 6kWh, 8kWh and 10kWh battery for each location.

Using a typical load profile, scaled to the typical power use for households of various size in Adelaide, Brisbane, Melbourne and Sydney, the following analysis derives two outcomes for households participating in the Cheaper Home Batteries Program: the expected payback period on their battery and the total savings they will net over the lifetime of that subsidised battery (see Appendix A for full methodology).

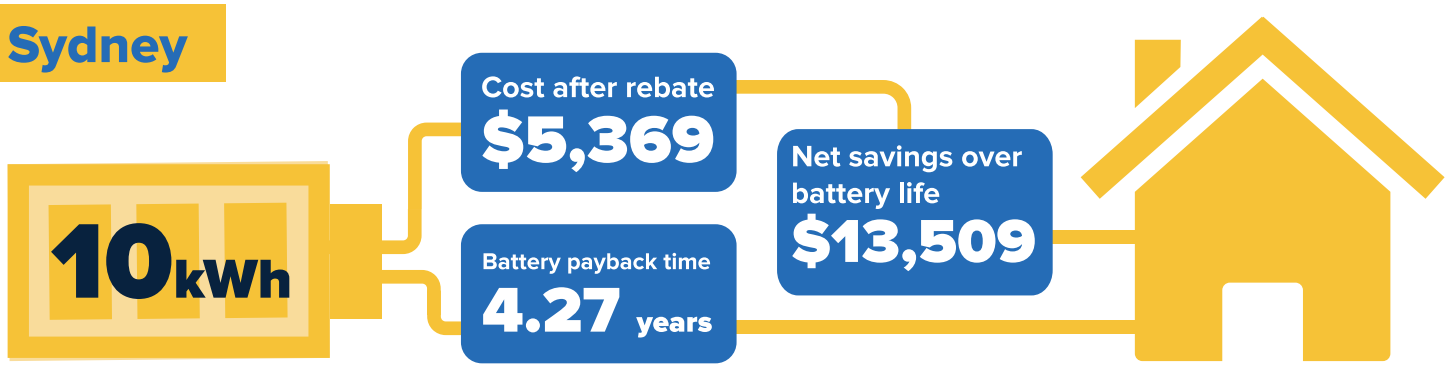
Note that these figures do not incorporate additional benefits delivered through state and territory schemes, which are outlined on page 7.

Adelaide



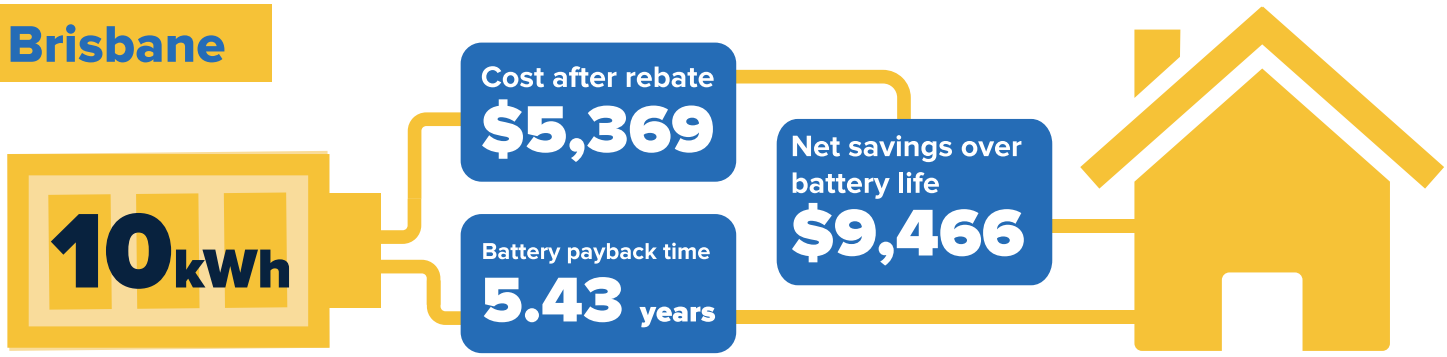
House size	4 people		
Battery size	6 kWh	8 kWh	10 kWh
Installed battery cost, less rebate	$4,826	$6,214	$5,369
Battery payback time	4.37 years	4.55 years	4.12 years
Net savings over the life of the battery	$11,733	$14,286	$14,180

Sydney



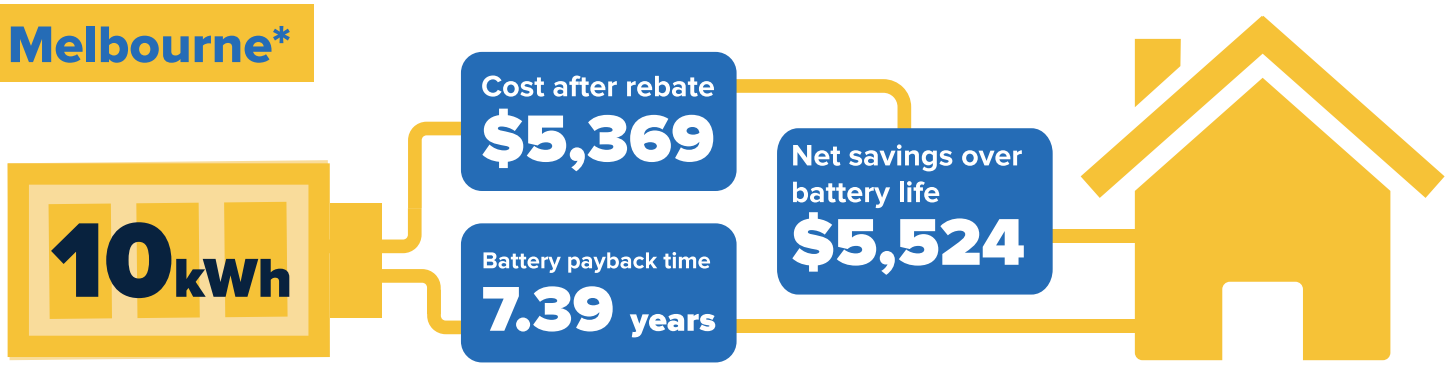
House size	4 people		
Battery size	6 kWh	8 kWh	10 kWh
Installed battery cost, less rebate	$4,826	$6,214	$5,369
Battery payback time	4.51 years	5.36 years	4.27 years
Net savings over the life of the battery	$11,241	$11,187	$13,509

Brisbane



House size	4 people		
Battery size	6 kWh	8 kWh	10 kWh
Installed battery cost, less rebate	$4,826	$6,214	$5,369
Battery payback time	6.81 years	7.42 years	5.43 years
Net savings over the life of the battery	$5,801	$6,356	$9,466

Melbourne*



House size	4 people		
Battery size	6 kWh	8 kWh	10 kWh
Installed battery cost, less rebate	$4,826	$6,214	$5,369
Battery payback time	8.13 years	8.76 years	7.39 years
Net savings over the life of the battery	$4,073	$4,431	$5,524

*noting that the high rates of gas use in Melbourne compared to other jurisdictions affect these results.

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‘Stacking’ the Cheaper Home Batteries Program with state and territory subsidies will make batteries even cheaper

The Cheaper Home Batteries Program is not means-tested and has no limit on the number of rebates per household. Combined with existing state or territory-based battery incentives, this will significantly reduce the upfront cost of batteries, leading to even greater savings.

- Under the NSW Empowering Homes program, eligible households and businesses can get a battery rebate of $1,600 to $2,400 off the upfront installation costs of a battery, depending on the solar battery size.
- Victoria’s Solar Battery Loan provides up to $8,800 in interest-free loans for battery storage. With the rebate from the Cheaper Batteries program, an average solar-connected Victorian household can pay off its battery cost through interest-free loan repayments.[3]
- Western Australia’s new Residential Battery Scheme, launching by July 1, 2025, will offer generous rebates to support household battery adoption through battery rebates of up to $5,000 and $7,500 (for regional consumers) and a $10,000 interest-free loans for low- and middle-income households to help with battery and solar installation costs.
- The ACT’s Sustainable Household Scheme offers zero-interest loans up to $15,000 for household energy storage, solar plus storage, and other selected energy efficiency improvements.
- The Northern Territory’s Home and Business Battery Scheme provides eligible homeowners, businesses, and not-for-profit organizations to access a grant of $400 per kWh of usable battery capacity, up to a maximum of $12,000 and covers both new solar PV systems with batteries and the addition of batteries to existing solar installations.
- Tasmania’s Energy Saver Loan Scheme is a government initiative that provides interest-free loans of $500 to $10,000 to help households, landlords, small businesses, and community organisations purchase and install energy-efficient products and upgrades, including battery storage.

For households that combine the subsidy under the Cheaper Home Batteries Program with a relevant state or territory subsidy, payback periods will be even shorter, and net savings greater, than those calculated in the section above.

Battery costs are falling, and lifetimes are increasing

Around the world, battery costs have fallen significantly in the last decade as uptake has increased. The IEA projects that cheaper mineral costs, especially lithium and rapid advancements in battery technology and manufacturing, will continue to lower prices into the future[4].

Last year, battery prices saw their biggest annual drop since 2017: lithium-ion battery prices fell to a record low of $115 per kilowatt-hour, according to analysis by Bloomberg, down from $806 per kilowatt-hour in 2013[5]. In Australia, the cost of household batteries has fallen by as much as 89% over the last decade and is continuing to decline[6]. As more batteries enter the Australian market, systems become more energy-efficient, and the industry attains greater scale with greater demand, this fall in prices is likely to continue.

Globally, household battery lifetimes are increasing due to advances in lithium-ion technology, better battery management systems, and improved manufacturing standards. In Australia, standard warranties for household batteries have reached 10 years, aligning with global trends.

By 2030, it is expected that mainstream household batteries in Australia will routinely exceed 10 years of useful life, meaning that most batteries will last several years after they have paid for themselves[7]. These trends mean Australian households can expect their batteries to last well into the next decade, with product choices and policy support both pushing the market toward even greater longevity.

With battery prices falling, battery lifespans steadily increasing, and generous government subsidies now available federally and in most states and territories, the financial case for investing in a battery has never been stronger. These trends mean that the net savings calculated in this report will continue to improve over time.

Battery savings are for all energy users, and all households

Owning a new battery through the Cheaper Home Batteries Program will lead to lower bills and higher savings for all households, including those without batteries and even without rooftop solar.

Many retailers run Virtual Power Plants (VPP) programs where customers receive bill credits or higher feed-in tariffs for allowing their battery to be used in this way.[8] Programs such as the NSW Peak Demand Reduction Scheme (PDRS) offer additional incentives for batteries that can help reduce peak demand, which aligns with shifting peak demand[9].

Energy used to charge a household battery could be sourced either from rooftop solar panels or, if there is unused battery capacity, topped up from the energy grid. In conjunction with solar soaker tariffs, households with excess storage capacity could charge their batteries during the day at very low cost and then discharge in the evening to sell energy back into the energy grid. This would provide a financial return to battery owners, whilst improving the overall efficiency of our energy systems.

Beyond individual household savings, the widespread adoption of household batteries is projected to deliver $1.3 billion in reduced wholesale electricity costs for all Australians by 2030, which would result in lower energy bills for all[10]. Thus, greater participation in the battery subsidy program will benefit more households, help to stabilise demand within the grid, and deliver lower electricity costs to more Australians.

Endnotes

1 AEMO *2024 Integrated System Plan*

2 Labor to deliver one million energy bill busting batteries

3 https://www.solar.vic.gov.au/solar-battery-loan

4 IEA (2025), The battery industry has entered a new phase, IEA, Paris https://www.iea.org/commentaries/the-battery-industry-has-entered-a-new-phase, Licence: CC

5 Lithium-Ion Battery Pack Prices See Largest Drop Since 2017, Falling to $115 per Kilowatt-Hour: BloombergNEF | BloombergNEF

6 How Much Do Solar Batteries Cost in Australia?

7 Turning point for incentives to invest in residential batteries | AEMC

8 2025 Federal Government Solar Battery Rebate for Australia | PSC

9 Install a battery | NSW Climate and Energy Action

10 Cheaper Home Batteries Program will slash power bills for all Australians - Smart Energy Council

Appendix A

Battery Savings Methodology

Independent variables:

Location

- Adelaide – SA Power Network
- Brisbane – Energex network
- Melbourne – Jemena network
- Sydney – Ausnet network

House size & electricity use

- Annual Household Power Use (kWh) - taken from Simple Electricity Benchmarks produced by Frontier Economics, commissioned by the AER, published December 2020. Climate zones were selected based on the major city location.
- Adelaide – 19,509kWh
- Brisbane – 21,046kWh
- Melbourne – 15,903kWh *noting that the high rates of gas use in Melbourne compared to other jurisdictions affects these results.
- Sydney – 20,0031kWh

Annual solar generation based on a 6.6kW system

- Adelaide – 26000kWh per day annualised
- Brisbane – 28000kWh per day annualised
- Melbourne – 24000kWh per day annualised
- Sydney – 26000kWh per day annualised

Time of Use electricity plans

- Used Origin's 'Go Solar Variable' plan for each network area, current as of 22 April 2025.
- Daily costs factored-in as well depending on the relevant network area.
- Feed-in tariffs offering a slightly higher rate for the first 8kWh exported, then lowering thereafter.

Batteries

- 6kWh – Delta BX 6.3 AC, with 6.17kWh usable capacity
  - Product cost of $5,280
  - Discount with federal rebate of $2,282.90 at $370 per kWh of usable capacity
  - Install cost estimated at $1,500
  - Total cost, less rebate of $4,862
  - Assuming a 15-year product life
- 8kWh – SigenStor Single-Phase 8kWh, with 7.8kWh usable capacity
  - Product cost of $7,600
  - Discount with federal rebate of $2,886 at $370 per kWh of usable capacity
  - Install cost estimated at $1,500
  - Total cost, less rebate of $6,214
  - Assuming a 15-year product life
- 10kWh – ALPHA-ESS SMILE5 10.1kWh, with 9.7kWh usable capacity
  - Product cost of $7,458
  - Discount with federal rebate of $3,589 at $370 per kWh of usable capacity
  - Install cost estimated at $1,500
  - Total cost, less rebate of $5,369
  - Assuming a 15-year product life