

# Australia s commercial and industrial energy storage battery cost-effectiveness





### **Overview**

The majority of respondents said commercial customers expect battery paybacks of 5–7 years or less to proceed with a project, highlighting the need for tightly sizing systems, and finding customers with advantageous tariff structures. Why is battery storage so important in Australia?

The rise of battery storage capacity in Australia represents a pivotal shift in the energy landscape as batteries offer an increasingly cost-effective means to address the variability of renewable energy and ensure grid stability.

Are battery energy storage system capital costs improving in 2024-25?

Image: Fluence. A new report published by Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO) has found that large-scale battery energy storage system (BESS) capital costs have improved the most in 2024-25, falling by 20% year-on-year (YoY).

Why are batteries so expensive in Australia?

Per kilowatt of power, batteries in Australia (in both the NEM and WEM) have increased in cost over time. But this is due to more recent projects being longer-duration: while the first Australian batteries were at one hour of duration or less, two-hour and four-hour batteries are now the norm.

Does battery storage play a significant role in the National Electricity Market?

Battery storage has historically not played a significant role in the National Electricity Market (NEM), but this is expected to change rapidly over the next decade. By 2035, total storage capacity is expected to exceed 36GW, based on the Step Change scenario in the Australian Energy Market Operator (AEMO) 2024 Integrated System Plan (ISP).

Why do businesses need battery storage?

Rising power prices, demand charges, and the need for more resilient infrastructure are driving investment in clean energy systems that deliver long-



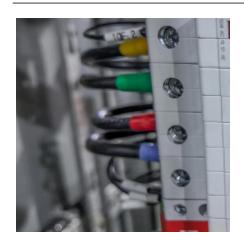
term savings and better control. Battery storage is fast becoming a core part of energy strategy for businesses of all shapes and sizes across Victoria.

Why is capital expenditure important when building a battery energy storage system?

This has led to multiple gigawatts of grid-scale battery energy storage systems in various stages of development in Australia. Each of them requires significant investment, with millions of dollars at stake and years-long development timelines. As a result, capital expenditure, or capex, is an important consideration when building a battery.



# Australia s commercial and industrial energy storage battery cost-e



# Australia: Large-scale BESS capital costs fall 20% year-on-year

A new report published by Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO) has found that large-scale battery energy storage system ...

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# Survey shows battery boom extends to C& I sector - pv magazine Australia

7 hours ago. Early results from a survey of Australia's commercial and industrial solar industry reveal surging demand for battery energy storage systems and increasing service expectations.

# Commercial Battery Solutions, Chelion

commercial storage Effective Energy Management Solutions As energy costs continue to rise, commercial battery storage systems offer businesses a ...





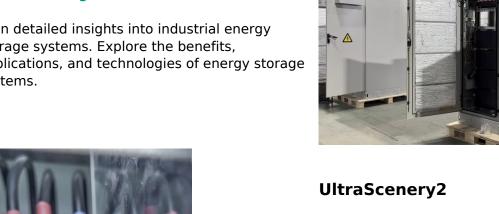


### **Australian battery storage sector**

While other energy storage technologies, such as pumped hydro, are an important element of the energy mix, this paper looks at the emerging sector of BESS, given it will likely be a critical ...

# <u>Industrial Energy Storage Systems</u> **Detailed Insights**

Gain detailed insights into industrial energy storage systems. Explore the benefits, applications, and technologies of energy storage systems.





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# <u>Commercial Battery Storage Costs: A</u> <u>Comprehensive ...</u>

As commercial energy systems evolve, battery storage solutions like lithium-ion systems have grown increasingly affordable, making them an attractive ...



# The economics of behind-the-meter battery storage.

What are behind-the-meter commercial & industrial (C& I) batteries? We're talking about smaller batteries, typically 100kWh to 5MWh in ...



# The Rise of Batteries in Australia: Best Battery Energy Storage ...

Commercial and industrial facilities face unique challenges when it comes to managing energy consumption and costs. Fluctuating energy prices and peak demand periods ...



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# CONNETECONS

# <u>Powering Australian Businesses with</u> <u>Battery Storage: ...</u>

By enabling businesses to store and manage renewable energy more effectively, C& I battery storage is empowering organizations to reduce ...



Commercial and industrial facilities face unique challenges when it comes to managing energy consumption and costs. Fluctuating energy prices ...





# Flow Batteries: The Future of Long-Duration Energy ...

Discover how flow batteries are revolutionizing long-duration energy storage. Learn about their cost-effectiveness, scalability, and role in ...



# <u>Australia installed 2.5GWh of battery</u> <u>storage in</u>

Top three residential storage manufacturers by market share included Alpha ESS (pictured), Tesla, and Sungrow. Image: Alpha ESS. ...



# What is Commercial and Industrial Energy Storage?

Commercial and industrial energy storage systems (C& I ESS) refer to large-scale battery solutions designed to store electricity for businesses, manufacturing plants, and ...



# <u>Battery Storage: Australia's current</u> climate

As the world shifts to renewable energy, the importance of battery storage becomes more and more evident with intermittent sources of ...



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# Powering Australian Businesses with Battery Storage: The C& I Energy

By enabling businesses to store and manage renewable energy more effectively, C& I battery storage is empowering organizations to reduce their carbon footprint, lower energy ...



# Utility-Scale Battery Storage, Electricity, 2023, ATB, NREL

Projected Utility-Scale BESS Costs: Future cost projections for utility-scale BESS are based on a synthesis of cost projections for 4-hour duration systems as described by (Cole and Karmakar, ...



# <u>Commercial Solar Battery Storage</u> Solutions in Australia

Implementing battery storage systems directly contributes to a decrease in overall electricity costs by improving energy efficiency and reducing reliance on grid-supplied power during the most ...



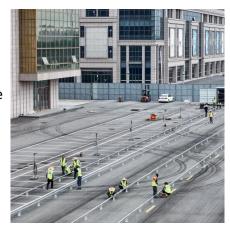
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# The Rise of Battery Storage Capacity in Australia

The rise of battery storage capacity in Australia represents a pivotal shift in the energy landscape as batteries offer an increasingly cost ...



# The Rise of Battery Storage Capacity in Australia

The rise of battery storage capacity in Australia represents a pivotal shift in the energy landscape as batteries offer an increasingly cost-effective means to address the ...



This report analyses the costs of building a gridscale battery in Australia (the NEM and WEM). We analyse costs for past projects as well as projections for the future, with comparisons to ...





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# Quinbrook & CATL's 8-Hour Battery For Renewables In Australia

The intermittent nature of renewable energy makes it imperative to be accompanied by energy storage solutions for reliable and cost-effective supply, especially for energy ...



7 hours ago. Early results from a survey of Australia's commercial and industrial solar industry reveal surging demand for battery energy storage systems and increasing service expectations.





# Commercial Battery Storage: The Future of Business Energy ...

Manufacturers and industrial operations can see big savings by using commercial battery storage to smooth out energy demand peaks. This is especially important for high ...



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