

Small-scale solar power generation systems in Australia





Overview

What drives residential solar energy adoption in Australia?

Combining upfront and ongoing subsidies effectively drives residential solar growth. Australia has garnered significant recognition for its leadership in residential solar energy adoption, driven by incentive programs like the Feed-in Tariff and the Small-Scale Renewable Energy Scheme.

What percentage of Australians export solar energy back into the grid?

According to the Australian Energy Regulator, in 2024, 27% of customers with rooftop solar exported their energy back into the grid. Those with solar and battery, or those who were able to export their energy back in during peak times, made up only 4%. New South Wales had the most battery sales in the second half of 2024 with 14,686.

Are Australian residential solar PV installations growing?

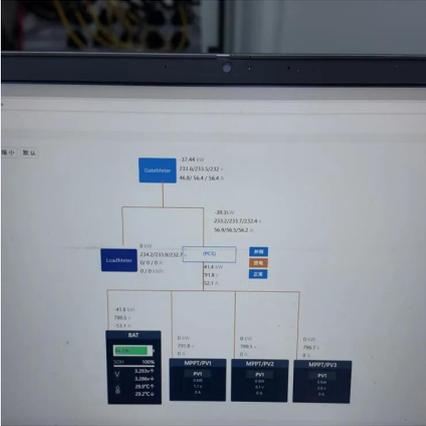
Fig. 1 displays the remarkable trajectory of Australian residential solar PV installations, which has grown dramatically since 2009, with cumulative capacity expanding from negligible levels to exceed 14,000 MW in 2023, demonstrating a compound annual growth rate of approximately 40%. Fig. 1.

What is solar PV & how does it work in Australia?

Energy can then be released from storage as required. Solar PV generated approximately 10 per cent of Australia's electricity in 2020-21, and is the fastest growing generation type in Australia. More than 30 per cent of Australian households now have rooftop solar PV, with a combined capacity exceeding 11 GW.



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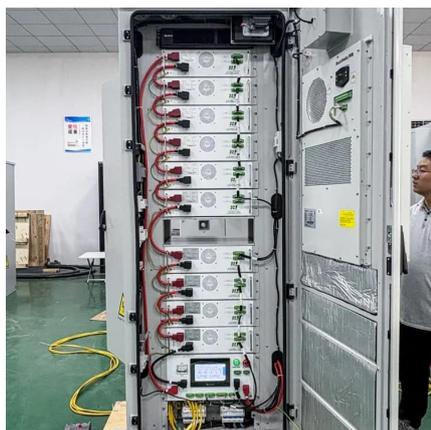
Figure 1: Share of rooftop PV generation in the NEM grid Source: Australian Energy Council analysis In the first quarter of 2025, the capacity of rooftop solar installations for ...

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The Australian Government's Small-scale Renewable Energy Scheme (SRES) reduces the cost of most new residential and business rooftop solar systems. From 1 July 2025, the Australian Government's ...

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Most of the PV systems in Australia are small-scale residential, and increasingly, commercial rooftop installations, which can be explored further via the PV Postcode Tool. There are also a ...



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As of February 2023, there were over 26,000 workers employed in Australia in renewable energy sector across solar, wind and storage. The SRES is part of the Renewable ...

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Solar power development occurs at multiple scales, from utility-level installations to residential systems. At the household level, these photovoltaic systems transform the energy ...

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Solar energy



This energy can be used to drive a refrigeration cycle to provide solar-based cooling. There are two main types of solar thermal technologies. Small scale thermal technology is used to heat ...

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Systems that generate electricity (not displace or store like solar batteries, solar water heaters and air source heat pumps) with higher capacity may be classified as power ...

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The small-scale renewable energy scheme is an Australian Government initiative, which provides households and businesses a financial incentive to install small-scale renewable energy systems such as rooftop ...

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[Australia: small-scale solar generation capacity projection](#)

By 2035, the installed small-scale solar power generation capacity in Australia is projected to increase to approximately ** gigawatts.

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