AUSTRALIAN PV INSTITUTE

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Australia continues its world leading installation rate with over 30GW installed nationwide.

The APVI (Australian Photovoltaics Institute) has released the “PV in Australia” report for 2022 [https://apvi.org.au/national-survey-report-of-pv-power-applications-in-australia-2022/] .

Australia continues to hold a world leading position in solar deployment and integration. By the end of 2022 Australia had reached 30GW of installed capacity, giving the country a world-leading installation rate of 1.2kW of solar per person.

In 2022 commercial and industrial rooftop installations exceeded residential installations for the first time – with 1.35GW of installs on residential roofs and an impressive 1.47GW on commercial and industrial roofs.

Despite world leading per-capita installed solar, new residential rooftop additions have dropped 23% and utility scale installs have dropped 20% since 2021. Ongoing falls in utility scale installations can largely be attributed to the end of the large-scale systems support in 2020 under the Commonwealth Government’s support for Large Scale Solar under the Renewable Energy Target.

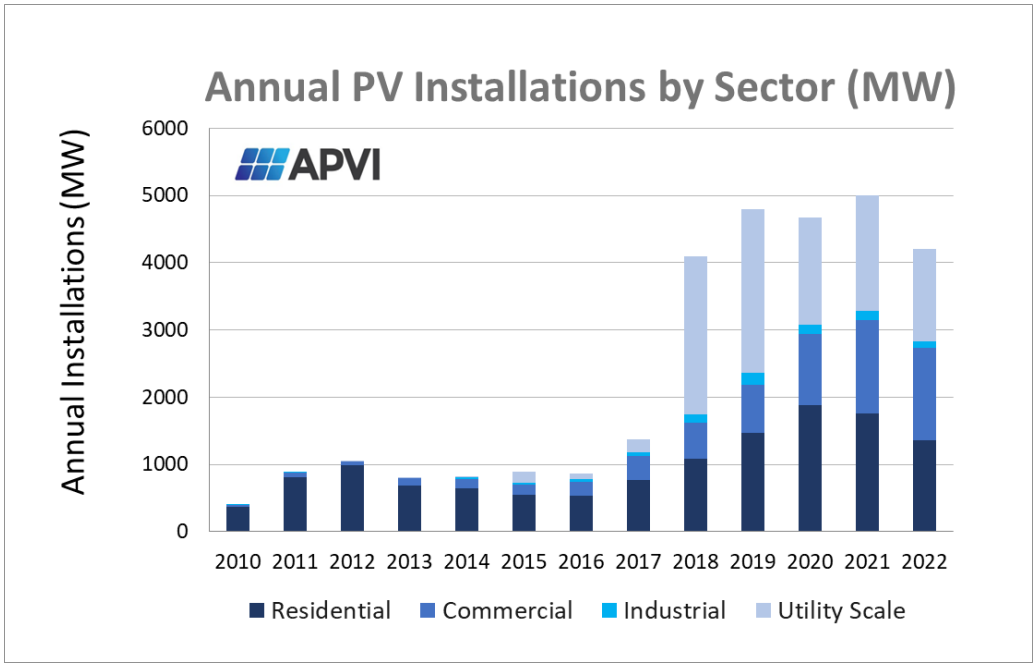

Figure 1. Annual PV installations by sector

Fun Facts

- The average penetration of solar on free-standing homes reached 37%, and the average size of new installations remained high at over 8.7 kW.
- With close to 20 GW on rooftops (residential, commercial, and industrial), Australia has continued the trend of doubling every three years with 10.4GW at the end of 2019 and 5.3GW at the end of 2016.
- More solar was installed in the year 2022 (4.2 GW) than the sum of all installations to the end of 2014 (4.1 GW)

An Expanding Market

Australia has always held a high market demand for rooftop solar and the size of the average rooftop install in 2022 was 8.7kW, maintain a steady growth in average PV system size since 2012. This demand for rooftop solar has kept Australia in the top ten markets for photovoltaics by annual installs and total installed capacity for over ten years, a remarkable outcome for a country of only 26 million people.

Professor Renate Egan, APVI Secretary and co-author of the report states that 'this rooftop market is expected to remain strong through to 2030, with increasing interest due to price pressures related to supply of coal and gas and increasing reliability issues with old cold-fired plant facing decommissioning in the next decade.'

At the end of 2022, Australia saw:

- The total number of rooftop-installs exceed 3.3 million rooftop installations.
- Over 37% of free-standing households across the nation powered with a PV system.
- The states of Queensland and South Australia with an average close to 40% of free-standing homes powered by solar - and a significant number of localities with densities of rooftop solar over 50%.

Interest in AgriPV continues to grow, with a number of case-study plants built over the last few years.

Large scale solar is seeing a pipeline of projects that are being supported by state led incentives. While ultra-large scale plants, between 10 GW and 30GW are also growing in interest for industrial use and electricity export, with several of these projects in the planning stage.

All Australian states now have a zero carbon by 2050 target and plans for Renewable Energy Zones. While the newly elected Federal government has made firm commitments to net-zero emissions which stands to improve investor confidence, leading to a projected growth in the solar PV sector.

PV in the Economy

Solar accounts for over 25,000 full time equivalent jobs in Australia. Indirect employment, which includes jobs related with local government, consultancies, industry associations and electricity utilities and would potentially double these numbers.

Australia retains a world class R&D sector in PV technologies, with the announcement in 2022 of continued support for the Australian Centre for Advanced Photovoltaics, out to 2030 by ARENA (Australian Renewable Energy Agency) and an open competitive round for additional research pursuing Ultra Low Cost Solar. In addition, the Federal Government Research and Development (R&D) Tax Incentive provides an incentive for the industry sector to offset the costs of eligible R&D.

Future Prospects

Following a change in government in mid 2022 Australia is seeing a renewed commitment to international decarbonisations goals as well as a renewed commitment to investing in energy security. The PV industry is confident that this will support growth in investment in 2023 and beyond.

Despite slow progress to date, well established plans and commitments are in place to invest in the transmission to meet increasing large-scale solar and in networks and gird management to integrate the significant investment by consumers in decentralised generation.

The ongoing investment in renewables will continue to present market and engineering challenges that will need to be met by policy and regulatory change including by a redesign of tariffs to incentivise use of low-cost, low-emissions power, by investments in storage and investments in transmission and distribution.

Technology is moving faster than policy and regulation and to maintain the rapid pace of renewable energy deployment, Australia needs to support further national electricity market reforms and provide policy certainty to support the needed electricity infrastructure investments and additional electricity transmission, energy storage and demand response mechanisms.

The latest stats are available at https://pv-map.apvi.org.au/analyses.

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Main Content: RJ Egan

Find the report on the APVI website https://apvi.org.au/national-survey-report-of-pv-power-applications-in-australia-2022/

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About the APVI

The Australian Photovoltaics Institute is a not-for-profit, member-based organisation which focuses on data analysis, independent and balanced information, and collaborative research. Our objective is to support the increased development and use of PV via research, analysis, and information.

The APVI promotes solar through its live solar mapping platform [http://pv-map.apvi.org.au], the national solar research conference and Australia's participation in two International Energy Agency (IEA) programs – PVPS (Photovoltaic Power Systems) for solar photovoltaics and SHC (Solar Heating and Cooling), concerned with new solar thermal products and services.

www.apvi.org.au