

Australia Photovoltaics Market Assessment, By Type [Monocrystalline Silicon, Polycrystalline Silicon, Thin Film Cells and Organic PV], By Grid Type (On grid, Off grid, and Hybrid), By Installation [Ground Mounted, Roof Mounted, Building Integrated Photovoltaics and Floating Photovoltaics], By Application [Solar Farms, Electronic Devices, Healthcare Facilities, Public Infrastructure, Aerospace, Construction, Military, and Defence, Transportation, and Others], By End-user [Residential, Commercial & Industrial, and Utility], and By Region, Opportunities, and Forecast, 2016-2030F

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Abstracts

Australia had been witnessing significant developments in its Photovoltaics (PV) market and is projected to reach USD 8.53 billion by 2030 from USD 3.77 billion in 2022 growing at a CAGR of 10.75% for the forecast period between 2023 and 2030. A continuous rise in the adoption of floating solar panels, an increase in the number of rooftop solar PV installations, a shift of consumer preferences towards renewable energy resources like solar energy, hefty investments in solar parks by the Australian govt, etc. are accelerating the growth of the market extensively.

Rooftop solar PV installations in Australia have experienced significant growth driven by several factors including favourable government policies and incentives, abundant solar resources, declining costs of solar technology, rising electricity prices, environmental consciousness, and technological advancements. As a result, there has been an increasing adoption of rooftop solar PV systems in residential, commercial, and

industrial properties across the country. Australians are leveraging rooftop solar to reduce their reliance on the grid contributing to a cleaner energy future and take advantage of the country's favourable solar conditions.

As per the Australian Government (Department of Climate Change, Energy, the Environment, and Water), Australia leads the world in solar adoption, with approximately 30% of households equipped with rooftop solar PV. As of January 31, 2022, over 3 million rooftop solar PV systems have been successfully installed throughout the country.

Increased Adoption of Floating Solar Panels

Australia has a vast land area, but it also faces challenges in terms of suitable land availability for large-scale solar installations. Floating solar panels offer a viable solution by utilizing water bodies such as reservoirs, lakes, and dams, which serve as alternative spaces for solar energy generation as these solar panels have the advantage of reducing water evaporation from the water bodies on which they are installed. Moreover, in a country like Australia, which experiences water scarcity and drought conditions in many regions, the combination of solar energy generation and water conservation becomes an attractive proposition. For example, in 2022, Warrnambool, a regional city in southwest Victoria, introduced its plan to launch the largest floating solar panel array in Australia. As part of a USD 1.4 million pontoon project revealed by Wannon Water, over 1,200 double-sided solar panels would be securely anchored in the centre of the Brierly Basin.

The Advent of Large-scale Solar Projects

Currently, the Australian government is focusing on increasing investments in large-scale solar projects in order to reduce the dependence on fossil fuels as their primary source of energy. Moreover, the rise in the adoption rate of solar projects is expected to continue in Australia over the upcoming years to cut dependency of oil imports and enhance energy security. For example, solar projects that commenced operations since 2020 included the Nevertire Solar Farm in New South Wales with a capacity of 105 MW, the Bomen Solar Farm in New South Wales with a capacity of 100 MW, the Merredin Solar Farm in Western Australia with a capacity of 100 MW, and the Yarranlea Solar Farm in Queensland with a capacity of 100 MW. Hence, it can be stated that the advent of large-scale solar projects are expediting the market growth of photovoltaics in Australia.

Government Initiatives

The Australian government is currently placing significant emphasis on advancing solar photovoltaic (PV) technology and allocating substantial investments towards its development. Furthermore, the government has implemented various policies aimed at enhancing the solar PV market in the upcoming years. For example, Australian government launched Small-scale Renewable Energy Scheme (SRES) that aims to support the adoption of small-scale renewable energy systems, including solar PV installations. Under the SRES, eligible solar PV systems with a capacity of up to 100 kilowatts (kW) can receive financial incentives in the form of Small-scale Technology Certificates (STCs). The higher the expected renewable energy generation, the more STCs are awarded. Moreover, by reducing the upfront costs, the SRES aims to make solar PV installations more affordable and attractive for residential and small-scale commercial customers. This encourages the uptake of solar PV systems, promotes renewable energy generation, and contributes to reducing greenhouse gas emissions. Furthermore, by reducing the initial investment required for solar PV installations, the SRES has made solar energy accessible to a broader range of consumers.

The cost reduction has made solar PV systems a viable and attractive option for homeowners and businesses looking to generate their own clean energy. This affordability has led to increased adoption rates, further fuelling the market growth of solar PV in Australia.

Impact of COVID-19

The global PV supply chain experienced disruptions due to lockdowns, travel restrictions, and factory closures in various countries. This led to delays in the production and delivery of PV components and equipment. As a result, some PV projects in Australia faced delays or difficulties in sourcing necessary materials, impacting installation timelines. On the other hand, the pandemic has heightened awareness of the need for clean and resilient energy sources in Australia. This increased interest in renewable energy, including solar PV, as a sustainable solution for reducing carbon emissions and improving energy security. Furthermore, the shift to remote work and increased time spent at home during lockdowns led to a greater focus on household energy consumption. Many Australians recognized the potential cost savings and environmental benefits of installing solar PV systems on their properties. The increased interest in self-sufficiency and energy independence contributed to a surge in residential PV installations.

Key Players Landscape and Outlook

The photovoltaic market in Australia is experiencing significant growth, prompting international companies to prioritize quality and brand positioning to maintain their market share and expand their global reach. These companies are investing more in research and development and marketing for significant advancements in solar PV technology, the introduction of new solar leasing programs, as well as expanding their distribution networks. Manufacturers are actively working on providing efficient solar PV modules to differentiate themselves from competitors.

Trina Solar introduced a new member to its Vertex solar PV module series called the Vertex S+ in 2022. This latest product offers a power output of up to 425W and achieves a maximum efficiency of 21.9%. It utilizes 210mm diameter wafers and employs a double-glass design instead of the traditional glass-and-back sheet structure. The Vertex S+ is specifically tailored for residential installations, as well as commercial and industrial (C&I) rooftops, catering to diverse customer needs in these sectors.

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*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work

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