# Australia Distributed Energy Generation Market Assessment, By Technology (Diesel and Oil Gensets, Natural Gas Gensets, Mini Hydropower Grids, Gas & Steam Turbine, Fuel Cells, Solar Photovoltaic, Wind Turbine, and Biomass Generators), By End-user (Residential, Commercial and Industrial), By Region, Opportunities, and Forecast, 2016-2030F

Market Report | 2024-04-19 | 96 pages | Market Xcel - Markets and Data

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**Report description:**

Australia had been witnessing significant developments in its distributed energy generation market. which is projected to reach USD 7.16 billion by 2030 from USD 4.08 billion in 2022. Distributed energy generation is primarily renewable energy since solar and wind energy can be harnessed wherever the required conditions meet, thereby contributing to the distribution of energy onto the existing grids. The country has been actively promoting the adoption of renewable energy, including solar power, to meet its growing electricity demand, which in turn is accelerating the distributed energy generation market growth exponentially. According to the Electricity Network Transformation Roadmap, by 2050, these resources could potentially account for up to 45 percent of the country's electricity generation capacity.  Furthermore, the continuous rise in the number of rooftop solar panel schemes by the government is also enhancing the market growth rate extensively.
For example, the initiative of the South Australia Home Battery Scheme was launched by the South Australian government to incentivize and support the adoption of residential solar and battery systems. The scheme also included attractive financing options with low-interest rates and a solar battery rebate of a maximum of USD 6,000. This rebate was specifically designed to encourage South Australians to adopt residential battery systems. Moreover, the program aims to encourage households to generate their own clean energy, reduce reliance on the grid, and contribute to the overall energy supply.
Investments by Government to Improvise Technology
Australia, with its abundant renewable energy resources, has been actively investing in the improvisation of its distributed energy generation technology. The country has a favorable climate for solar and wind power generation, making it an ideal location for

implementing distributed energy systems. This has attracted significant investment from institutions to harness solar energy and contribute to grid systems.  For example, Australian Renewable Energy Agency (ARENA) has committed over USD 12 million in funding to enhance investment and system efficiency and overcome obstacles in order to promote the adoption of distributed energy resources (DER) in Australia. The scheme included attractive financing options with low-interest rates and a solar battery rebate. The allocated funds would be utilized for network hosting capacity technology and demonstration projects, which aim to explore innovative approaches for comprehending and addressing the effects of widespread DER integration across various sections of the distribution network.  Hence, the rise in investments for the improvisation of distributed energy generation technology is fueling market growth.

Substantial Growth of Onshore and Offshore Wind Power

Australia's energy future revolves around wind power (both offshore and onshore), and solar energy, which has been the primary catalyst for the doubling of renewable energy generation in the country over the past ten years. As per Australia Trade and Investment Commission, Australia currently has an onshore wind capacity exceeding 9.1 GW, and in 2021, an additional 1.7 GW of capacity was installed, which marked the third consecutive year of record-breaking growth in the sector. Furthermore, the offshore wind sector in Australia is progressing rapidly following the implementation of a new legal framework. In June 2022, the Offshore Electricity Infrastructure Act was passed, facilitating the development of offshore wind projects. Hence, it can be deciphered that the Australian Government is actively supporting the expansion of wind energy (both offshore and onshore) as part of its commitment to transforming the electricity grid and achieving its net-zero emissions targets, thereby propelling the distributed energy generation growth at an extensive rate.

Government Regulations

The Australian government is fully dedicated to advancing the technological advancements of distributed energy generation and is making significant investments in this area. Additionally, the government has implemented various policies aimed at enhancing distributed energy generation in the coming years. Feed-in tariffs (FiTs) in Australia are a type of incentive program that encourages the adoption of distributed energy generation systems, such as solar panels or wind turbines, by providing financial compensation to energy producers who feed excess electricity back into the grid. Moreover, the Feed-in-tariffs serve multiple purposes in Australia's distributed energy generation market landscape. They promote renewable energy adoption, incentivize investment in small-scale generation systems, reduce dependence on traditional fossil fuel-based electricity generation, and contribute to overall energy sustainability.

The Solar Premium Feed-in-Tariff (FiT) program provided eligible households, businesses, and community organizations in Victoria with small-scale solar systems of five kilowatts or below. These participants received a minimum credit of 60 cents per kilowatt hour for any surplus electricity they fed back into the grid. Over 88,000 Victorian households, small businesses, and community groups have benefited from the Program for Feed-in Tariffs (PFIT).  Thus, it can be elucidated that the introduction of Solar Premium Feed-in-Tariff (FiT) by the Australian govt is expediting the market growth exponentially.

Impact of COVID-19

The COVID-19 pandemic had an adverse effect on commercial and industrial Distributed Energy Resources (DER) projects, resulting in a slowdown across various sectors. The economic downturn caused by the pandemic led to financial difficulties for many businesses, leading to a reduction in investments in renewable energy installations and other DER technologies. The uncertain and disrupted supply chains further aggravated the challenges faced by project developers. The restrictions and lockdown measures implemented to control the spread of the virus had a direct impact on the progress of DER projects.

These measures limited the availability of labor and materials required for installations. Social distancing guidelines and travel restrictions made it difficult for installers and technicians to work on-site, causing delays and disruptions to project timelines. Moreover, the supply chain disruptions caused by the pandemic affected the availability of essential components and equipment needed for DER installations. Manufacturing and transportation delays, as well as the closure of certain industries, resulted in a shortage of key resources, further hampering project development.

Key Players Landscape and Outlook

The distributed energy generation market in Australia is witnessing substantial expansion, leading the firms to emphasize the importance of quality and brand positioning to sustain their market share and expand their presence worldwide. These organizations are working on a set of compliance standards regarding solar safety regulations set by the government throughout

the country. Moreover, Australian companies are allocating increased resources to research and development, marketing, and improvisation of energy distribution efficacy.
In June 2023, Goldwind Australia Pty Ltd received a grant through the state government's Emerging Energy Program. The project entails the incorporation of six 12-Megawatt (MW) gas reciprocating engines, along with a 12-MW/4-Megawatt-hour (MWh) battery storage facility, into an existing renewable energy farm. The company further emphasized that this initiative would mark the country's inaugural integrated gas, battery, and renewable precinct, ultimately enhancing the efficiency of energy distribution. The combined capacity of the gas engine and battery storage plant will amount to 84 MW.
In June 2022, Enphase Energy, a prominent global energy technology company specializing in microinverter-based solar and battery systems, revealed that an increasing number of solar installers in Australia are opting to offer the company's Enphase products. This trend is occurring in response to the implementation of stricter solar safety regulations and compliance standards throughout the country. Enphase's reputation as a leading supplier in the industry has led to its products being favored by installers seeking to ensure adherence to these enhanced safety requirements.

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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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