

## **Residential Solar Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2020 - 2029**

Market Report | 2024-02-17 | 125 pages | Mordor Intelligence

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### **Report description:**

The Residential Solar Energy Market size is estimated at 138.70 gigawatt in 2024, and is expected to reach 190.98 gigawatt by 2029, growing at a CAGR of 6.69% during the forecast period (2024-2029).

#### Key Highlights

- Over the medium term, factors such as favorable government policies, the increasing investment in upcoming rooftop solar projects, and the reduced cost of solar energy, which has led to increased adoption of solar energy, are expected to drive the market during the forecast period.
- On the other hand, the lack of financing options coupled with the difficulties in integrating residential solar PV systems in the regions like Africa is expected to restrain the growth of the market.
- Nevertheless, ambitious targets to increase the renewable share in their energy mix. Governments across these nations have also planned to increase the renewable energy share through the deployment of residential solar PV systems in the coming years. This, in turn, is expected to act as an opportunity to the residential solar energy manufacturers and suppliers during the forecast period.
- Asia-Pacific is the fastest-growing market during the forecast period due to the rising energy demand. This growth is attributed to increasing investments, coupled with supportive government policies in the countries of this region, including India, China, and Australia.

#### Residential Solar Energy Market Trends

Increasing Rooftop Solar Installations to Drive the Market

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- The increasing adoption of solar PV systems in the residential sector is primarily driven by expected savings in electricity costs, the need for an alternative source of electricity, and the desire to mitigate climate change risk.
- During the forecast period, the demand for rooftop solar PV is expected to increase due to decreasing solar PV costs, supportive government policies for residential solar PV, FIT programs and incentives, and various solar energy targets.
- The cost of electricity for residential rooftop solar PV applications has rapidly declined in recent years. The falling price has resulted in a massive increase in the residential PV capacity globally. Many countries are increasing their residential rooftop targets.
- The Solar Energy Industry Association (SEIA) statistics show that, in 2022, residential solar PV installed capacity in the United States accounted for about 5.08 GW. The total installed capacity grew by 23% compared to the previous year.
- According to the SEIA report for Q3 2022, the US residential segment had a historic quarter with 1.57 GW dc installed, a 43% increase over Q3 2021 and a 16% increase over Q2 2022. California made up 36% of this total as installers continue to push to sell residential solar before changes to current net metering rates.
- A European Joint Research Centre analysis shows that EU rooftop PV could produce 680 TWh of solar electricity annually.
- In Germany, according to the coalition agreement, it will become compulsory at the national level to install solar PV on commercial buildings, and it will become a standard rule for new residential buildings.
- All such factors have driven the demand for residential solar energy over the study period.

#### Asia-Pacific to Dominate the Market

- Asia-Pacific accounted for more than 30% of the global residential solar PV market and is expected to continue its dominance during the forecast period.
- India's solar PV installed capacity increased significantly from 49.3 GW in 2021 to 62.8 GW in 2022. The power is further expected to increase in the coming years.
- By the end of 2023, the Chinese government proposed to cover 50% of rooftop space with solar panels on party and government buildings, 40% of schools, hospitals, and other public facilities, 30% of industrial and commercial areas, and 20% of rural households. A total of 676 counties from 31 provinces have registered for the scheme.
- The Ministry of New and Renewable Energy (MNRE) grid-connected rooftop solar program aims to offer a 40% subsidy for the first 3 kW of generation capacity in rooftop systems and a 20% subsidy up to a 10 kW ceiling.
- Owing to these factors, the demand for residential solar energy is expected to increase in the Asia-Pacific region over the forecast period.

#### Residential Solar Energy Industry Overview

The residential solar energy market is fragmented. Some of the major players in the market (in no particular order) include Trina Solar Co. Ltd, Canadian Solar Inc., JinkoSolar Holding Co. Ltd, Hanwha Q Cells Co. Ltd, and Tesla Inc.

#### Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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