

Germany Solar Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Germany Solar Energy Market size is estimated at 115.12 gigawatt in 2025, and is expected to reach 266.73 gigawatt by 2030, at a CAGR of 18.3% during the forecast period (2025-2030).

Key Highlights

- Over the medium term, factors such as the decreasing cost of solar energy infrastructure, coupled with the increasing electricity prices from conventional energy sources, are expected to drive the growth of the German solar energy market.
- On the other hand, the increasing adoption of alternate energy sources is expected to hinder the market's growth.
- Nevertheless, there is a rise in technological advancements in solar technology, such as increasing solar module efficiency. These measures present tremendous opportunities for the German solar energy market.

Germany Solar Energy Market Trends

Solar Photovoltaic (PV) Expected to Dominate the Market

- The German solar energy market has undergone significant transformations in recent years. As one of the leading countries in adopting renewable energy, Germany has consistently prioritized the development of its solar sector. This commitment is rooted in the country's ambitious energy transition goals, known as the "Energiewende," which seek to reduce carbon emissions, phase out nuclear power, and shift toward a sustainable energy future.
- The declining costs of solar technology, particularly photovoltaic panels, have played a pivotal role in expanding the market in

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Germany. As solar panels have become more affordable, the return on investment for solar installations has improved, making them increasingly appealing to consumers and businesses. The steady decrease in solar equipment prices has also led to an increase in the competitiveness of solar power against traditional energy sources.

- In July 2023, Emeren Group Ltd, a global solar project developer and operator, announced the successful sale of an 11.5 MWp PV project to the Swiss-based energy company MET Group. The project was sold at the Ready-to-Build ("RTB") stage, and MET Group is expected to complete the construction and operate the power plant. The solar PV power plant will be located in Kentzlin, Germany, in the state of Mecklenburg-Western Pomerania. Commercial operations are expected to start soon.
- According to data from the International Renewable Energy Agency RE Capacity 2024, the solar energy PV installations in Germany increased from 67,477 MW in 2022 to 81,737 MW in 2023, adding 14,260 MW in just one financial year, thus promising strong growth in the market.
- In September 2023, Uniper made a strategic decision to establish a 300 MWp photovoltaic plant in Elsfleth, Germany. This project is expected to cover an area of approximately 281 hectares. The chosen location is near the Huntorf and Wilhelmshaven asset locations. By aligning with the regional energy concept "Photovoltaik Wesermarsch," this plant is expected to contribute significantly to sustainable energy production.
- Furthermore, the German solar energy market has exhibited robust international competitiveness. The country is home to several leading solar technology manufacturers and suppliers, making it a key player in the global solar industry. Germany's export of solar products and technology contributes significantly to the country's economic growth and trade surplus.
- In conclusion, Germany's solar PV market is a dynamic and rapidly expanding sector that has witnessed remarkable growth due to supportive government policies, declining technology costs, a commitment to sustainability, innovative financing models, and strong international competitiveness.

Increase in Prices of Electricity Procured from Conventional Mechanisms Expected to Drive the Market

- Germany has vast solar energy potential, and accordingly, renewable energy companies have continued to leverage this potential to ramp up their share in the renewable energy mix. However, electricity generation from fossil-fuel technologies and various means of selling electricity have substantially increased prices in recent years.
- Hence, the high cost of electricity generation from fossil fuels could help Germany transition to cheaper renewable energy resources, such as solar energy. This is anticipated to act as a growth driver for consumers, utilities, commercial, and industrial stakeholders to install solar energy generation infrastructure, thereby increasing the market penetration of solar energy in Germany.
- In March 2024, the German Energy Ministry also announced shutting down seven coal-lignite-fired power plants. The country aims to fully phase out coal power by the end of the decade and switch to Electricity Procurement from Conventional Mechanisms like Solar and Wind.
- In May 2023, the German government announced that it would ease bureaucratic hurdles for solar power as the country set a new record for photovoltaic installations during the first quarter. The government aims to have 215 GW of solar installed in Germany by 2030, more than tripling existing capacity in seven years.
- In June 2022, household electricity prices in Germany were EUR 0.3279 per kilowatt Hour, which increased to EUR 0.4125 per kilowatt Hour in June 2023, citing a 25.8% increase. Such reasons invite a demand for more electricity offtake from cheaper solar energy resources in Germany.
- Moreover, the Germany Solar Package, which the government rolled out, aims to install 215 GW of solar panels by 2030. In June 2022, the Government of Germany increased the feed-in tariff for solar energy power plants up to 750 kW for residential areas, which also encourages end-consumers to install solar PV rooftop power plants and earn revenue by injecting electricity into the conventional grid. These government interventions are expected to enhance the solar energy market in the long term.
- In the current market scenario, the high electricity prices have forced high-energy-intensive industries such as steel, cement, food, and beverage to either shut down or curtail the rate of production. This has highlighted the importance of the integration of

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renewable energy resources such as solar in Germany.

- Hence, such factors are expected to drive the growth of the solar energy market in Germany in a scenario where electricity prices sold by utility or independent power producers are shooting up.

Germany Solar Energy Industry Overview

The German solar energy market is moderately fragmented. Some of the major players in the market (in no particular order) include IBC Solar AG, Centrotherm International AG, SunPower Corporation, Energie Baden-Wurttemberg AG, and Hanwha Corporation.

Additional Benefits:

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

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