

Solar Power Market to Expand from USD 273 Billion in 2024 to USD 436.36 Billion by 2032 at 6% CAGR

The global solar power market was valued at USD 253.69 billion in 2023 and is projected to grow from USD 273.00 billion in 2024 to USD 436.36 billion by 2032.

PUNE, INDIA, February 7, 2026

/EINPresswire.com/ -- The global [solar power market](#) was valued at USD

253.69 billion in 2023 and is projected to grow from USD 273.00 billion in

2024 to USD 436.36 billion by 2032,

exhibiting a CAGR of 6% during the

forecast period. North America dominated the solar power market with a share of 41.30% in 2023, driven by strong federal incentives, tax credits, and rapid utility-scale solar installations.

Market growth is primarily supported by increasing global commitments toward carbon neutrality, large-scale investments in renewable energy infrastructure, and continuous technological advancements in solar photovoltaic (PV) and concentrated solar power (CSP) technologies.

Get Free Sample Research Report:

<https://www.fortunebusinessinsights.com/enquiry/request-sample-pdf/solar-power-market-100764>

Top Companies in Solar Power Market

Trina Solar

First Solar

Canadian Solar Inc.

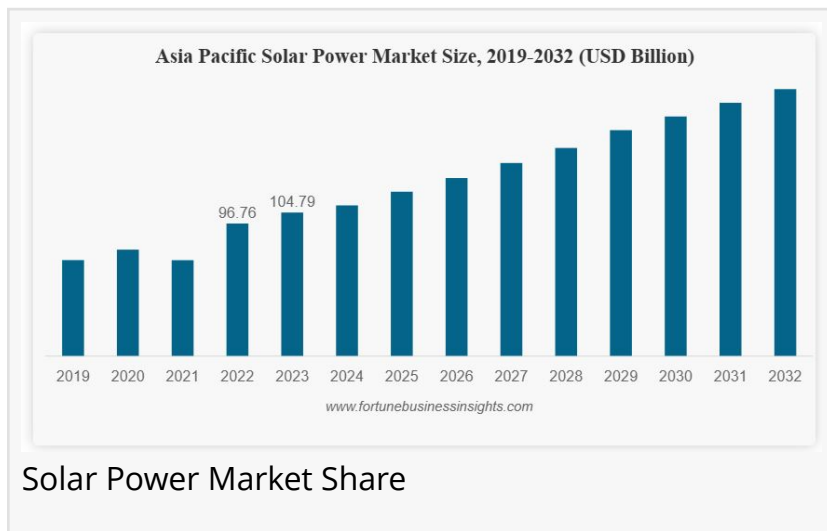
SunPower Corporation

Tata Power Solar Systems Ltd.

Waaree Group

General Electric Company

BrightSource Energy, Inc.



Solar Power Market Share

Solar Power Market Trends

Integration of advanced digital technologies is emerging as a key trend in the solar power market. Artificial intelligence (AI), Internet of Things (IoT), big data analytics, and machine learning are increasingly used to improve energy forecasting, asset management, fault detection, and predictive maintenance. These technologies enhance system efficiency, reduce downtime, and optimize energy output, thereby improving overall project economics.

Another important trend is the development of high-efficiency solar modules and next-generation materials such as bifacial modules, perovskite-silicon tandem cells, and larger wafer formats. These innovations are enabling higher power output per module, reduced balance-of-system costs, and improved land-use efficiency.

Solar Power Market Growth Factors

Countries worldwide are aggressively pursuing green energy targets to curb greenhouse gas emissions and reduce reliance on fossil fuels. Governments are introducing renewable portfolio standards, feed-in tariffs, net-metering policies, and tax incentives to accelerate solar deployment. For instance, Germany aims to source around 65% of its electricity from renewables by 2030, while China and India continue to scale up solar installations to meet rapidly rising electricity demand.

The growing adoption of renewable energy for power generation is another major growth driver. Renewable sources currently account for nearly 29% of global electricity generation, and this share is expected to rise significantly over the next decade. Solar PV, in particular, has become one of the fastest-growing renewable technologies due to declining module prices, shorter project development cycles, and minimal operating costs.

Rapid urbanization and industrialization in developing economies are further boosting electricity consumption, encouraging governments and utilities to invest in large-scale solar projects. Additionally, expansion of energy storage systems and modernization of transmission infrastructure are improving grid integration of solar power, supporting market growth.

Solar Power Market Segmentation Analysis

By technology, the market is segmented into solar photovoltaic (PV) and concentrated solar power (CSP). The solar PV segment dominates the market due to its high efficiency, long lifecycle, low maintenance requirements, and suitability for both small-scale and utility-scale installations. Continuous improvements in mono-crystalline silicon, thin-film, and multi-crystalline modules are further strengthening PV adoption. CSP, on the other hand, is gaining traction for its ability to store thermal energy and provide dispatchable power, making it suitable for large utility projects in high-solar-irradiance regions.

By application, the market is divided into residential, non-residential, and utility. The utility segment holds the largest share owing to extensive deployment of large-scale solar farms to

meet national renewable energy targets. The residential segment is also witnessing steady growth as homeowners adopt rooftop solar systems to reduce electricity bills and achieve energy independence.

Speak to Analyst:

<https://www.fortunebusinessinsights.com/enquiry/speak-to-analyst/solar-power-market-100764>

Regional Insights

North America dominated the global solar power market in 2023, supported by strong policy frameworks, federal tax credits, and increasing investments in domestic solar manufacturing. The U.S. market is projected to reach USD 103.96 billion by 2032.

Asia Pacific is expected to register the fastest growth during the forecast period, driven by massive solar capacity additions in China and India. China remains the world's largest producer and consumer of solar panels, while India continues to expand solar installations under national renewable energy programs.

Europe represents a mature market characterized by high renewable penetration and ambitious decarbonization targets. Countries such as Germany, Spain, and the U.K. are actively expanding solar capacity to reduce dependence on imported fossil fuels.

The Middle East & Africa is anticipated to witness strong growth due to abundant solar resources, rising electricity demand, and increasing adoption of solar projects in off-grid and remote areas.

Key Industry Developments

March 2022: Solaria announced the launch of its PowerXT 430R-PL solar panel optimized for next-generation module-level power electronics.

March 2022: Canadian Solar signed two 10-year power purchase agreements with Axpo Italia covering 70% of energy output from two solar plants under development.

January 2022: Recurrent Energy (a subsidiary of Canadian Solar) signed an agreement with Appalachian Power for the Firefly Energy solar project in Virginia.

October 2021: Solliance Solar Research achieved 29.2% power conversion efficiency in a perovskite-silicon tandem solar cell configuration.

January 2021: FTC Solar launched Voyager+, a next-generation single-axis tracker compatible with large-format solar modules.

The research report presents a comprehensive qualitative and quantitative analysis of the global market. It examines the adoption of solar power systems across multiple regions and provides an in-depth assessment of the competitive landscape, highlighting key market players and their strategic initiatives. Additionally, the report analyzes prevailing trends, growth drivers, opportunities, threats, and restraints, enabling stakeholders to gain valuable insights for informed decision-making.

Related Reports

[Solar Cable System Market Size, 2032](#)

[Solar Backsheet Market Size, 2032](#)

Ashwin Arora

Fortune Business Insights™ Pvt. Ltd.

+1 833-909-2966

sales@fortunebusinessinsights.com

Visit us on social media:

[LinkedIn](#)

[Facebook](#)

[X](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/889947647>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2026 Newsmatics Inc. All Right Reserved.