

# Solar Power Equipment Market to Surge from \$101.9 Billion in 2020 to \$310.4 Billion by 2030, with a CAGR of 11.3%

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WILMINGTON, DE, UNITED STATES, June 18, 2025 /EINPresswire.com/ -- Solar Power Equipment Market: Trends, Growth, and Forecast (2021–2030)

## Market Overview

According to a detailed report by Allied Market Research titled “[Global Solar Power Equipment Market by Equipment and Application: Global Opportunity Analysis and Industry Forecast, 2021–2030](#),” the global solar power equipment market was valued at \$101.9 billion in 2020 and is projected to reach \$310.4 billion by 2030, registering a robust compound annual growth rate (CAGR) of 11.3% from 2021 to 2030. The market encompasses a range of equipment, including solar panels, mounting, racking, and tracking systems, storage systems, and others, serving applications in residential, non-residential, and utility sectors. The market’s growth is driven by increasing global awareness of renewable energy, supportive government policies, and rising environmental concerns. While challenges such as dependency on solar radiation persist, the market is poised for significant expansion, particularly in regions with strong renewable energy initiatives.

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The solar power equipment market is fueled by the global push to combat climate change, rising energy demand, and the adoption of renewable energy sources. The Asia-Pacific region dominated the market in 2020, accounting for nearly half of the global share, while North America is expected to witness significant growth due to favorable policies and increasing energy needs. The market’s resilience during the COVID-19 pandemic, coupled with technological advancements, underscores its potential for sustained growth over the forecast period.

## Key Drivers of Market Growth

Growing Awareness of Renewable Energy

Increasing awareness of the importance of renewable energy sources is a primary driver of the solar power equipment market. Rising global temperatures and climate change impacts, such as rising sea levels, frequent floods, and droughts, have heightened the urgency to transition to sustainable energy solutions. Solar power, as a clean and renewable energy source, is gaining traction as a viable alternative to fossil fuels. This shift is driving demand for solar power equipment, including panels, storage systems, and mounting solutions, across residential, commercial, and utility applications.

### Supportive Government Policies

Government initiatives and policies play a crucial role in propelling the solar power equipment market. Many countries are implementing incentives, subsidies, and ambitious renewable energy targets to encourage the adoption of solar power. For instance, according to the India Brand Equity Foundation, India had a renewable energy capacity of 101.53 gigawatts (GW) as of September 2021, with a target of reaching 450 GW by 2030, of which over 60% (approximately 280 GW) is expected to come from solar energy. Such policies, combined with tax benefits and financing options, are boosting investments in solar power infrastructure, driving demand for related equipment.

### Rising Demand for Solar Water Heaters

The increasing use of solar water heaters in residential and commercial settings is contributing to market growth. Solar water heaters offer a cost-effective and environmentally friendly solution for heating water, reducing reliance on conventional energy sources. This trend is particularly pronounced in regions with high solar radiation and supportive policies, further fueling the demand for solar power equipment.

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### Market Challenges

Despite its promising growth, the solar power equipment market faces challenges, primarily due to its dependency on solar radiation. The efficiency of solar power systems is directly influenced by sunlight availability, which can be inconsistent in regions with limited sunny days or seasonal variations. This limitation poses a restraint on market expansion, particularly in areas with less favorable climatic conditions. However, advancements in energy storage systems and hybrid energy solutions are mitigating this challenge by enabling more reliable power supply.

### Impact of the COVID-19 Pandemic

The COVID-19 pandemic had a profound impact on global economies, but the solar power

equipment market demonstrated resilience. Unlike many industries that faced significant declines, the demand for electricity increased during the pandemic, driving growth in the solar power sector. Total shipments of solar panels grew by nearly 7% from 2019 to 2020, reflecting sustained demand. The ability of the industry to adapt to disruptions, coupled with the growing emphasis on renewable energy, ensured that the market experienced no significant negative impact during the crisis.

## Market Segmentation

### By Equipment

The market is segmented into solar panels, mounting, racking, and tracking systems, storage systems, and others. In 2020, the solar panels segment held the highest market share, driven by their critical role in capturing solar energy. The mounting, racking, and tracking systems segment is expected to witness significant growth during the forecast period, fueled by increasing demand from residential users and utility providers seeking efficient and adaptable solutions to optimize solar energy capture.

### By Application

The market is analyzed across residential, non-residential, and utility applications. The utility segment led in revenue in 2020 and is projected to grow at a CAGR of 11.2% during the forecast period, driven by substantial investments from public and private entities. The rise in utility-scale solar projects, particularly in regions like Asia-Pacific and North America, is a key factor contributing to this segment's growth.

### By Region

Asia-Pacific dominated the global market in 2020, accounting for approximately half of the total revenue, driven by strong renewable energy adoption in countries like China and India. North America is expected to register a high CAGR, supported by growing energy demand and favorable government policies. Europe and LAMEA are also witnessing growth, with increasing investments in renewable energy infrastructure.

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## Competitive Landscape

The solar power equipment market is highly competitive, with key players focusing on innovation, product development, and strategic partnerships to maintain their market positions. Major companies profiled in the report include ABB Group, Canadian Solar, First Solar Inc., Hanwha Q CELLS, JA Solar, JinkoSolar, LONGi Solar, Shunfeng International, SunPower Corporation, and Trina Solar. These players are investing in advanced technologies to enhance

the efficiency and affordability of solar equipment. For instance, innovations in solar panel efficiency and energy storage solutions are helping companies meet the evolving needs of consumers and utilities.

### Key Benefits for Stakeholders

The Allied Market Research report provides a comprehensive analysis of current and emerging trends in the solar power equipment market. It includes detailed market estimations for key segments from 2021 to 2030, offering stakeholders valuable insights into growth opportunities. The report also examines market dynamics, including drivers, restraints, and opportunities, to provide a clear understanding of the competitive landscape. A regional analysis highlights prevailing opportunities across Asia-Pacific, North America, Europe, and LAMEA, while the forecast from 2021 to 2030 offers a strategic roadmap for decision-making.

### Future Opportunities

The solar power equipment market is poised for significant growth, driven by several emerging opportunities. The increasing adoption of energy storage systems is addressing the challenge of solar radiation dependency, enabling more reliable power supply. Additionally, the global push for renewable energy, supported by ambitious government targets, is creating a sustained demand for solar equipment. The rise in utility-scale solar projects, particularly in emerging markets, presents lucrative opportunities for manufacturers. Furthermore, advancements in solar technology, such as bifacial panels and improved tracking systems, are expected to enhance efficiency and drive market expansion.

### Conclusion

The global solar power equipment market is on a robust growth trajectory, with a projected value of \$310.4 billion by 2030. Driven by increasing awareness of renewable energy, supportive government policies, and rising demand for solar water heaters and utility-scale projects, the market offers significant opportunities for stakeholders. Despite challenges such as dependency on solar radiation, technological advancements and the industry's resilience during the COVID-19 pandemic underscore its potential for sustained growth. With a competitive landscape marked by innovation and strategic investments, key players are well-positioned to capitalize on the global shift toward clean energy, particularly in regions like Asia-Pacific and North America.

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