

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

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Report description:

The India Solar Energy Market is expected to register a CAGR of 19.8% during the forecast period.

India's solar market is estimated to be at 79.07 GW by the end of this year and is projected to reach 195.11 GW after five years.

Key Highlights

- Over the medium term, the Indian solar energy market is growing owing to the cost of solar power technology declining, solar systems becoming more flexible, and solar power is a greener way to make electricity. The market is also propelled by supportive government policies, particularly the Ministry of New and Renewable Energy (MNRE) plans to encourage renewable-based power generation.
- On the other hand, the solar energy market is restrained by issues like transmission and distribution losses and unpredictability in the continuity of power supply.
- Nevertheless, India has a lot of solar irradiance and gets solar energy all year. This means there are many places in the sunniest parts of the country, like Rajasthan, Gujarat, and Andhra Pradesh, where solar energy can be used. This, along with foreign investment and a lot of research and development projects to improve the technology, gives the Indian solar energy market a lot of chances to grow.

Solar in India Market Trends

Solar PV Segment is Expected to Dominate the Market

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- The solar PV segment is expected to have the biggest market share during the forecast period. This is because the cost of solar modules is decreasing, and these systems can be used for many different things, like making electricity and heating water.
- As per IRENA, India's installed solar PV capacity was around 62.8 GW in 2022, up from 49.3 GW in 2021. This was an increase of approximately 31% over the year. India put in a lot of solar PV installations, especially for utility projects, which led to growth. The Government of India plans to increase the solar PV installed capacity.
- The National Thermal Power Corporation Limited (NTPC) turned on a solar PV project near Hazira in Surat in August 2022. The Kawas solar PV project has a capacity of 56 MW; with this project, NTPC will increase its solar footprint to 68,454 MW of group-installed and commercial capacity. With the completion of these types of projects, the share of the solar PV segment in the Indian solar energy market is expected to increase in the forecast period.
- In January 2022, Reliance Industries (RIL) signed a pact with the Gujarat government to invest USD 80.61 billion in Gujarat over ten to fifteen years to set up 100 GW of renewable energy power plants and a green hydrogen ecosystem. At the utility scale, renewable energy power plants include solar power plants. RIL is expected to invest USD 8.12 billion in setting up manufacturing facilities for solar PV modules, electrolyzers, batteries, and fuel cells for upcoming renewable projects.
- Because of these changes, the solar PV segment is expected to have the biggest market share in India over the next few years.

Supportive Government Policies to Drive the Market

- In Recent years, the country planned various government initiatives to increase the solar energy share of India's future renewable power generation mix. According to Ministry of New and Renewable Energy, as of February 2023, the solar energy constitutes 66.70 GW installed capacity in 2022.
- According to the Ministry of New and Renewable Energy's (MNRE) national wind-solar hybrid policy, this policy is a framework for promoting large grid-connected wind-solar PV hybrid systems. These systems will reduce the unpredictability of renewable energy generation and improve grid stability while using land and transmission infrastructure best.
- Some other schemes implemented by the Ministry of New and Renewable Energy (MNRE) over the last three years are the Solar Park Scheme, the 300 MW Defense Scheme, and the 500 MW VGF (Viability Gap Funding) Scheme.
- The Delhi government approved its Solar Policy 2022 plan in December 2022. The plan calls for the installed capacity to go from 2,000 MW to 6,000 MW in the two years. Delhi's new solar policy aims to install 6,000 MW of solar capacity in the two years. This will likely bring the share of solar energy in Delhi's annual electricity demand from 9% to 25% in three years.
- Thus, with the upcoming government projects and supportive policies, solar energy developments are expected to boost the Indian solar energy market in the coming years.

Solar in India Industry Overview

The Indian solar energy market is fragmented. Some of the major companies operating in the market (not in particular order) include Adani Enterprises Ltd., Emmvee Photovoltaic Power Private Limited, Azure Power Global Limited, JinkoSolar Holdings Co. Ltd., and First Solar Inc., among others.

Additional Benefits:

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

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