

## **India Rooftop Solar Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 95 pages | Mordor Intelligence

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### **Report description:**

The Indian rooftop solar market is expected to record a CAGR of more than 15% over the forecast period 2022-2027. The Indian rooftop solar market was mostly unaffected by the COVID-19 pandemic and even witnessed growth during 2020. In 2020, rooftop solar photovoltaic installations of 85 MW in Q2 and 155 MW in Q3 were completed. Factors such as rising environmental concerns, favorable government policies, incentives and tax benefits for solar panel installation, and the high cost of grid expansion, especially in rural areas, are expected to be major drivers for the market. However, a lack of general awareness is likely to restrain the growth of the Indian rooftop solar market over the coming years.

- The industrial sector is expected to dominate the market during the forecast period, owing to factors like high tariffs for electricity from central grids.
- Commercial and industrial sectors are showing a growing interest in distributed solar power generation due to its various economic benefits. It is also a constant energy source that can eliminate downtime and equipment damage caused due to voltage fluctuations in conventional power grids. This is likely to create an opportunity for the market to grow in the near future.
- The gradual shift from energy generation from conventional sources, such as coal and natural gas, to clean energy is expected to help boost the rooftop solar market in the country.

India Rooftop Solar Market Trends

Industrial Sector to Dominate the Market

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- The industrial sector dominated the rooftop solar market in recent years and is expected to witness significant growth in the forecast period, owing to factors like high tariff rate of electricity from central grids, reduced payback period, and bifacial and large-size high-wattage modules offering cost-effective support for reducing the rate of electricity.
- The industrial sector's share in solar rooftop installed capacity has grown each year. As of 2020, India's deployed rooftop solar capacity reached 7,920 MW, of which almost 75% of the installations were in the commercial and industrial segment, as per a report by the Institute for Energy Economics and Financial Analysis (IEEFA).
- According to the Ministry of New and Renewable Energy, India added 883 MW of rooftop solar in the first nine months of 2020, despite the COVID-19 pandemic and the imposition of lockdowns, which impacted the sector.
- Also, the Indian government had planned to achieve 100 GW of solar power capacity in the country by 2022, of which 40 GW was to be achieved from rooftop solar (RTS).
- Solar power is now cheaper for industrial entities than electricity from central grids. For example, residential and agricultural users in India are subsidized while industrial consumers are levied an additional cross-subsidy surcharge, leading to higher than average main electricity tariffs. As a result, rooftop solar installations are likely to grow in the industrial sector.
- The payback period for industrial consumers has also come down to 3-4 years and is likely to further reduce with advancements in technology, reductions in equipment costs, and a rise in retail tariffs for industrial entities by ailing distribution utilities. Currently, in a capital expenditure (CAPEX) model, payback can be realized by a shorter duration of 3-4 years, while for an OPEX project, the tariff rate is about INR 3.5-4/kWh (USD 0.047 -0.053), which is less than half the average of commercial and industrial grid tariffs prevalent across most states in the country.
- Therefore, the aforementioned factors are expected to help boost the market over the forecast period.

#### Increasing Demand for Clean Energy to Drive the Market

- Increasing demand for clean energy is among the primary drivers for the rooftop solar market in the country.
- Rooftop solar offers the benefits of modern electricity services to households with no access to electricity, reducing electricity costs on islands and in other remote locations that are dependent on oil-fired generation, and enabling residents and small businesses to generate their electricity.
- Commercial and industrial systems remain the largest segment because their electricity tariffs are relatively higher than other sectors. Also, they have a relatively stable load profile during the day that can enable larger savings on electricity bills, depending on the policy scheme in place.
- Rooftop solar installed capacity grew from 623 MW in 2015 to 6,792 MW by the end of 2020. The six largest states by installed rooftop solar at the end of February 2020 were Maharashtra, Rajasthan, Tamil Nadu, Karnataka, Delhi, and Gujarat.
- These, in turn, are likely to propel the demand for rooftop solar in the region during the forecast period.

#### India Rooftop Solar Market Competitor Analysis

The Indian rooftop solar market is fragmented. Some of the key players in this market include Cleantech Solar Energy India Pvt. Ltd, Fourth Partner Energy Pvt. Ltd, Amplus Solar Power Pvt. Ltd, Tata Power Solar Systems Limited, and Growatt New Energy

Technology Co. Ltd, among others.

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

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