

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

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Report description:

The Indian solar energy market is expected to record a CAGR of more than 8% during the forecast period. The COVID-19 outbreak did not significantly impact the Indian solar energy market, as growth was witnessed in the solar PV installed capacity in 2020 compared to 2019. The cumulative growth in electricity generation by solar energy sources also accelerated in 2020. Major factors driving the Indian solar energy market are the declining cost of solar power technology, the flexibility of these systems, and a greener method of power generation. However, the solar energy market is restrained by issues like T&D losses (Transmission & Distribution) and unpredictability in the continuity of power supply.

Key Highlights

The solar PV segment is expected to dominate the Indian solar energy market during the forecast period, as PVs are significantly cheaper than other solar technologies and include a simplified installation procedure.

India has an abundance of solar irradiance and receives solar energy throughout the year, creating many opportunities to exploit solar energy from the sunniest sites in the country, especially Rajasthan, Gujarat, and Andhra Pradesh. This factor, clubbed with foreign investment and extensive R&D projects to improve the technology, provides ample opportunities for the growth of the Indian solar energy market.

The market is also propelled by supportive government policies, particularly the plans formulated by the Ministry of New & Renewable Energy (MNRE) to encourage renewables-based power generation.

India Solar Energy Market Trends

Solar PV Segment is Expected to Dominate the Market

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The solar PV segment is expected to have the largest market share during the forecast period, owing to declining costs of solar modules and the versatility of these systems for various applications, like electricity generation and water heating. According to the International Renewable Energy Agency (IRENA), the installed solar PV capacity in India was around 38.98 GW in 2020, up from 34.86 GW in 2019, recording a growth of around 11% during the year. The growth resulted from huge deployments of solar PV installations in India, particularly for utility projects. The Government of India has more plans to increase the solar PV installed capacity.

In December 2021, MNRE invited applications for the Expression of Interest for conducting the evaluation study of Phase-II of the Grid Connected Rooftop Solar Program. The program is a part of the National Solar Mission, which aims at installing 40 GW capacity of grid-connected solar rooftop installation systems by 2022.

In January 2022, Reliance Industries(RIL) signed a pact with the Gujarat government to invest INR 5 lakh crore in Gujarat over 10-15 years to set up 100 GW renewable energy power plants and a green hydrogen eco-system. Renewable energy power plants include solar power plants at a utility scale. RIL is expected to invest INR 60,000 crore in setting up manufacturing facilities for solar PV modules, electrolyzers, batteries, and fuel cells for the upcoming renewable projects.

Due to these developments, the solar PV segment is expected to have the largest market share in India during the forecast period.

Supportive Government Policies to Drive the Market

Recently, the country planned various government initiatives to increase the solar energy share of India's renewable power generation mix in the future.

In April 2021, MNRE approved a Production Linked Incentive (PLI) Scheme, namely, 'National Programme on High-Efficiency Solar PV Modules', with an investment of INR 4,500 crore. The scheme has various provisions for supporting the set up of integrated manufacturing units of high-efficiency solar PV modules by offering Production Linked Incentive (PLI) on sales of such solar PV modules. It aims at enhancing domestic manufacturing capabilities and exports for the coming years.

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 of VGF (Viability Gap Funding) Scheme. In January 2020, India made an ambitious target of having 450 GW of renewable energy by 2030. The announcement was made by the central government, which is already working on the project of installing around 100 GW of solar energy by 2022.

In December 2020, the Gujarat government implemented "the Surya Urja Rooftop Yojana" scheme to install solar rooftops for 8 lakh residential consumers by March 2022. Under this scheme, 40% of state subsidy will be provided on installing systems up to 3 kW and 20% subsidy for 3 kW-10 kW systems.

Such developments are expected to boost the Indian solar energy market in the coming years.

India Solar Energy Market Competitor Analysis

The Indian solar energy market is fragmented. Some of the major companies operating in the market include Adani Enterprises Ltd, Emmvee Photovoltaic Power Private Limited, Azure Power Global Limited, JinkoSolar Holdings Co. Ltd, and First Solar Inc.

Additional Benefits:

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

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Table of Contents:

1 INTRODUCTION

1.1 Scope of the Study

1.2 Market Definition

1.3 Study Assumptions

2 EXECUTIVE SUMMARY

3 RESEARCH METHODOLOGY

4 MARKET OVERVIEW

4.1 Introduction

4.2 Renewable Energy Mix, India, 2020

4.3 Solar Energy Installed Capacity and Forecast, in GW, till 2027

4.4 Government Policies and Regulations

4.5 Recent Trends and Developments

4.6 Market Dynamics

4.6.1 Drivers

4.6.2 Restraints

4.7 Supply Chain Analysis

4.8 PESTLE Analysis

5 MARKET SEGMENTATION

5.1 Technology

5.1.1 Solar Photovoltaic (PV)

5.1.2 Concentrated Solar Power (CSP)

6 COMPETITIVE LANDSCAPE

6.1 Mergers and Acquisitions, Joint Ventures, Collaborations, and Agreements

6.2 Strategies Adopted by Leading Players

6.3 Company Profiles

6.3.1 Domestic Players

6.3.1.1 Adani Solar

6.3.1.2 Emmvee Solar

6.3.1.3 Mahindra Susten Pvt. Ltd

6.3.1.4 Sterling and Wilson Pvt. Ltd

6.3.1.5 Tata Power Solar Systems Ltd

6.3.1.6 Vikram Solar Limited

6.3.1.7 ReNew Power Pvt. Ltd

6.3.1.8 NTPC Ltd

6.3.1.9 Azure Power Global Ltd

6.3.2 Foreign Players

6.3.2.1 JinkoSolar Holdings Co. Ltd

6.3.2.2 First Solar Inc.

6.3.2.3 Hanwha Q Cells Co. Ltd

6.3.2.4 SMA Solar Technology AG

6.3.2.5 Trina Solar Limited

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