

Indian Solar Electric System and Inverter Market Report and Forecast 2025-2034

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Report description:

The Indian solar electric system and inverter markets are expected to reach volume of almost 43.20 Gigawatt by the year 2034 , growing at a CAGR of 13.10% between 2025 and 2034.

The Indian solar electric system and inverter market is driven by the rising awareness regarding renewable power resources. The market is further aided by the maintenance cost related to solar electric systems, which is comparatively low, helping it gain traction, especially in an emerging economy such as India. Telangana is the leading regional market in India.

Market Segmentation

A solar panel is referred to as a collection of cells which is utilised to produce electricity using sunlight as the energy source, whereas a solar inverter is referred to as a device which helps in the conversion of the direct current produced by the panels into alternating current. This current is then distributed to either power grids, storage batteries, or houses for operating various appliances.

The Indian solar electric system market is bifurcated on the basis of technology type into:

- Crystalline Silicon
- Thin Films

Out of these, crystalline silicon represents the most preferred segment.

On the basis of installation type, the Indian solar electric system market is segmented into:

- Ground Mounted
- Rooftop

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Amongst these, the ground mounted segment hold the largest market share.

The Indian solar inverter market is segmented on the basis of inverter type into:

- Central Inverter
- String Inverter
- Others

On the basis of the inverter type, central inverters represent the leading type in the industry.

The Indian solar inverter market is segmented on the basis of region into:

- Telangana
- Tamil Nadu
- Rajasthan
- Andhra Pradesh
- Gujarat
- Karnataka

Market Analysis□

The Indian solar electric system and inverter market is driven by the constant shortage in the electricity supply across the country. The market is further aided by the rising population, in conjunction with rising adoption rates of electronic appliances and heating, ventilating, and air conditioning (HVAC) systems, and electronic appliances, which has resulted in the escalating use and consequent deficit in the supply of electricity. In addition to this, the market is witnessing a reduction of the prices of equipment used in the production process of such electric systems, thereby reducing their average selling price and boosting the Indian solar electric system and inverter market growth.

The market is aided by the rising awareness of the risks associated with the use of conventional energy sources, leading to a significant shift in the preference of consumers toward cleaner power sources. Moreover, several government initiatives are encouraging the use of these systems and, consequently, impacting their sales positively. For example, the Government of India offers incentives and subsidies for the installation of rooftop systems. The government has taken many initiatives under its wings, which aim to achieve a national solar rooftop target of 40 GW till 2021-2022.

Competitive Landscape□

The report gives a detailed analysis of the following key players in the Indian solar electric system and inverter market, covering their competitive landscape, capacity, and latest developments like mergers, acquisitions, and investments, expansions of capacity, and plant turnarounds:

- Fimer S.p.A.
- Toshiba Mitsubishi-Electric Industrial Systems Corporation
- SMA Solar Technology AG
- Hitachi Hi-Rel Power Electronics Private Limited
- Vikram Solar Limited
- Waaree Energies Ltd.
- Adani Group

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- Goldi Solar Pvt Ltd
- Tata Power Solar Systems Ltd
- Moser Baer Solar Limited
- XL Energy Ltd.
- Others

The comprehensive EMR report provides an in-depth assessment of the market based on the Porter's five forces model along with giving a SWOT analysis.

Table of Contents:

- 1 Executive Summary
 - 1.1 Market Size 2024-2025
 - 1.2 Market Growth 2025(F)-2034(F)
 - 1.3 Key Demand Drivers
 - 1.4 Key Players and Competitive Structure
 - 1.5 Industry Best Practices
 - 1.6 Recent Trends and Developments
 - 1.7 Industry Outlook
- 2 Market Overview and Stakeholder Insights
 - 2.1 Market Trends
 - 2.2 Key Verticals
 - 2.3 Key Regions
 - 2.4 Supplier Power
 - 2.5 Buyer Power
 - 2.6 Key Market Opportunities and Risks
 - 2.7 Key Initiatives by Stakeholders
- 3 Economic Summary
 - 3.1 GDP Outlook
 - 3.2 GDP Per Capita Growth
 - 3.3 Inflation Trends
 - 3.4 Democracy Index
 - 3.5 Gross Public Debt Ratios
 - 3.6 Balance of Payment (BoP) Position
 - 3.7 Population Outlook
 - 3.8 Urbanisation Trends
- 4 Country Risk Profiles
 - 4.1 Country Risk
 - 4.2 Business Climate
- 5 Global Solar Electric System Market Overview
 - 5.1 Key Industry Highlights
 - 5.2 Global Solar Electric System Historical Market (2018-2024)
 - 5.3 Global Solar Electric System Market Forecast (2025-2034)
 - 5.4 Global Solar Electric System Market by Technology Type
 - 5.5 Global Solar Electric System Market by Installation Type
 - 5.6 Global Solar Electric System Market by Region

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- 5.6.1 North America
- 5.6.2 Europe
- 5.6.3 Asia Pacific
- 5.6.4 Latin America
- 5.6.5 Middle East and Africa
- 6 Global Solar Invertor Market Overview
- 6.1 Key Industry Highlights
- 6.2 Global Solar Invertor Historical Market (2018-2024)
- 6.3 Global Solar Invertor Market Forecast (2025-2034)
- 6.4 Global Solar Invertor Market by Inverter Type
- 6.5 Global Solar Invertor Market by Region
- 6.5.1 North America
- 6.5.2 Europe
- 6.5.3 Asia Pacific
- 6.5.4 Latin America
- 6.5.5 Middle East and Africa
- 7 Indian Solar Electric System Market Analysis
- 7.1 Key Industry Highlights
- 7.2 Indian Solar Electric System Historical Market (2018-2024)
- 7.3 Indian Solar Electric System Market Forecast (2025-2034)
- 7.4 Indian Solar Electric System Market by Technology Type
- 7.4.1 Crystalline Silicon
- 7.4.1.1 Historical Trend (2018-2024)
- 7.4.1.2 Forecast Trend (2025-2034)
- 7.4.2 Thin Films
- 7.4.2.1 Historical Trend (2018-2024)
- 7.4.2.2 Forecast Trend (2025-2034)
- 7.5 Indian Solar Electric System Market by Installation Type
- 7.5.1 Ground Mounted
- 7.5.1.1 Historical Trend (2018-2024)
- 7.5.1.2 Forecast Trend (2025-2034)
- 7.5.2 Rooftop
- 7.5.2.1 Historical Trend (2018-2024)
- 7.5.2.2 Forecast Trend (2025-2034)
- 7.6 Indian Solar Electric System Market by States
- 7.6.1 Telangana
- 7.6.2 Tamil Nadu
- 7.6.3 Rajasthan
- 7.6.4 Andhra Pradesh
- 7.6.5 Gujarat
- 7.6.6 Karnataka
- 7.6.7 Others
- 8 Indian Solar Inverter Market Analysis
- 8.1 Key Industry Highlights
- 8.2 Indian Solar Inverter Historical Market (2018-2024)
- 8.3 Indian Solar Inverter Market Forecast (2025-2034)
- 8.4 Indian Solar Inverter Market by Inverter Type

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- 8.4.1 Central Inverter
 - 8.4.1.1 Historical Trend (2018-2024)
 - 8.4.1.2 Forecast Trend (2025-2034)
- 8.4.2 String Inverter
 - 8.4.2.1 Historical Trend (2018-2024)
 - 8.4.2.2 Forecast Trend (2025-2034)
- 8.4.3 Others
- 8.5 Indian Solar Inverter Market by States
 - 8.5.1 Telangana
 - 8.5.2 Tamil Nadu
 - 8.5.3 Rajasthan
 - 8.5.4 Andhra Pradesh
 - 8.5.5 Gujarat
 - 8.5.6 Karnataka
 - 8.5.7 Others
- 9 Regional Analysis
 - 9.1 Telangana
 - 9.1.1 Historical Trend (2018-2024)
 - 9.1.2 Forecast Trend (2025-2034)
 - 9.2 Tamil Nadu
 - 9.2.1 Historical Trend (2018-2024)
 - 9.2.2 Forecast Trend (2025-2034)
 - 9.3 Rajasthan
 - 9.3.1 Historical Trend (2018-2024)
 - 9.3.2 Forecast Trend (2025-2034)
 - 9.4 Andhra Pradesh
 - 9.4.1 Historical Trend (2018-2024)
 - 9.4.2 Forecast Trend (2025-2034)
 - 9.5 Tamil Nadu
 - 9.5.1 Historical Trend (2018-2024)
 - 9.5.2 Forecast Trend (2025-2034)
 - 9.6 Gujarat
 - 9.6.1 Historical Trend (2018-2024)
 - 9.6.2 Forecast Trend (2025-2034)
 - 9.7 Karnataka
 - 9.7.1 Historical Trend (2018-2024)
 - 9.7.2 Forecast Trend (2025-2034)
- 10 Market Dynamics
 - 10.1 SWOT Analysis
 - 10.1.1 Strengths
 - 10.1.2 Weaknesses
 - 10.1.3 Opportunities
 - 10.1.4 Threats
 - 10.2 Porter's Five Forces Analysis
 - 10.2.1 Supplier's Power
 - 10.2.2 Buyers Power
 - 10.2.3 Threat of New Entrants

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- 10.2.4 Degree of Rivalry
- 10.2.5 Threat of Substitutes
- 10.3 Key Indicators for Demand
- 10.4 Key Indicators for Price
- 11 Value Chain Analysis
- 12 Manufacturing Process
 - 12.1 Solar Panel Manufacturing Process
 - 12.1.1 Product Overview
 - 12.1.2 Detailed Process Flow
 - 12.1.3 Various Types of Unit Operations Involved
 - 12.1.4 Mass Balance and Raw Material Requirements
 - 12.2 Solar Inverter Manufacturing Process
 - 12.2.1 Product Overview
 - 12.2.2 Detailed Process Flow
 - 12.2.3 Various Types of Unit Operations Involved
 - 12.2.4 Mass Balance and Raw Material Requirements
- 13 Government Initiatives
 - 13.1 Jawaharlal Nehru National Solar Mission
 - 13.2 Solar Rooftop Subsidy Scheme Yojana
 - 13.3 Solar Park Scheme
 - 13.4 VGF (Viability Gap Funding) Scheme
 - 13.5 Solar Energy Subsidy Scheme
 - 13.6 UDAY Scheme
- 14 Competitive Landscape
 - 14.1 Supplier Selection
 - 14.2 Key Global Players
 - 14.3 Key Regional Players
 - 14.4 Key Player Strategies
 - 14.5 Company Profiles
 - 14.5.1 Fimer S.p.A.
 - 14.5.1.1 Company Overview
 - 14.5.1.2 Product Portfolio
 - 14.5.1.3 Demographic Reach and Achievements
 - 14.5.1.4 Financial Summary
 - 14.5.1.5 Certifications
 - 14.5.2 Toshiba Mitsubishi-Electric Industrial Systems Corporation
 - 14.5.2.1 Company Overview
 - 14.5.2.2 Product Portfolio
 - 14.5.2.3 Demographic Reach and Achievements
 - 14.5.2.4 Financial Summary
 - 14.5.2.5 Certifications
 - 14.5.3 SMA Solar Technology AG
 - 14.5.3.1 Company Overview
 - 14.5.3.2 Product Portfolio
 - 14.5.3.3 Demographic Reach and Achievements
 - 14.5.3.4 Financial Summary
 - 14.5.3.5 Certifications

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14.5.4 Hitachi Hi-Rel Power Electronics Private Limited

14.5.4.1 Company Overview

14.5.4.2 Product Portfolio

14.5.4.3 Demographic Reach and Achievements

14.5.4.4 Financial Summary

14.5.4.5 Certifications

14.5.5 Others

14.6 Solar Panel Key Players

14.6.1 Vikram Solar Limited

14.6.1.1 Company Overview

14.6.1.2 Product Portfolio

14.6.1.3 Demographic Reach and Achievements

14.6.1.4 Financial Summary

14.6.1.5 Certifications

14.6.2 Waaree Energies Ltd.

14.6.2.1 Company Overview

14.6.2.2 Product Portfolio

14.6.2.3 Demographic Reach and Achievements

14.6.2.4 Financial Summary

14.6.2.5 Certifications

14.6.3 Adani Group

14.6.3.1 Company Overview

14.6.3.2 Product Portfolio

14.6.3.3 Demographic Reach and Achievements

14.6.3.4 Financial Summary

14.6.3.5 Certifications

14.6.4 Goldi Solar Pvt Ltd

14.6.4.1 Company Overview

14.6.4.2 Product Portfolio

14.6.4.3 Demographic Reach and Achievements

14.6.4.4 Financial Summary

14.6.4.5 Certifications

14.6.5 Tata Power Solar Systems Ltd

14.6.5.1 Company Overview

14.6.5.2 Product Portfolio

14.6.5.3 Demographic Reach and Achievements

14.6.5.4 Financial Summary

14.6.5.5 Certifications

14.6.6 Moser Baer Solar Limited

14.6.6.1 Company Overview

14.6.6.2 Product Portfolio

14.6.6.3 Demographic Reach and Achievements

14.6.6.4 Financial Summary

14.6.6.5 Certifications

14.6.7 XL Energy Ltd.

14.6.7.1 Company Overview

14.6.7.2 Product Portfolio

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14.6.7.3 Demographic Reach and Achievements

14.6.7.4 Financial Summary

14.6.7.5 Certifications

14.6.8 Others

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