



India's solar manufacturing to grow in manifolds

Discussing India's COP-26 commitments and the tax imposition on solar products, experts from the solar sector, evaluate the possible threats and opportunities that may reshape our manufacturing capacities by leaps and bounds.

India has been overgrowing in this direction and now boasts an installed capacity of 57 GW. Despite the pandemic-hit year in 2020 that slowed down growth in solar, India geared up to establish 14.2 GW successfully and reclaim the Global third position in 2021, mentioned Solar Power Europe Report 2022 – 2026.

India's current solar energy capacity

The installed base of renewable energy has increased globally across countries. The global installed solar capacity recently surpassed 1 TW (1000 GW), rapidly growing from the 100 GW mark in 2012. Amit Barve, BU Head - Solar, Panasonic Life Solutions India Pvt. Ltd., commented on this, saying, "By 2030, India intends to install 500 GW of renewable energy, with solar PV accounting for 280 GW of that

total." Despite challenging situations in supply chain disruptions and rising costs, India had its best quarter and first half in recent years. As a growing trend, corporations are encouraged to view the transition to green energy as a serious strategic initiative. Solar integration throughout the value chain has never been more critical. Decision-makers in the commercial and industrial sectors appear to have recognised the benefits of green energy, particularly solar, and the pandemic has only increased demand for onsite installations.

Vikas Arya, Associate Vice President-Product Strategy, Jakson Group, use this opportunity to highlight the more than 20 per cent increase in raw material costs due to the BCD on solar cells. This price increase has increased the cost of solar wafers and solar cells. As a result, manufacturers should plan and order

solar cells three months in advance to ensure material availability. This would reduce our reliance on Chinese imports even further.

Gautam Mohanka, Managing Director, Gautam Solar, claims, "As of February 28, 2022, India had exceeded 50 GW of total installed solar capacity, with 42 GW coming from ground-mounted solar Photovoltaic (PV) systems, 6.48 GW from rooftop solar (RTS), and 1.48 GW from off-grid solar PV. This milestone could be reached if India adds a record 10 GW of solar energy capacity to its cumulative capacity in 2021, the most capacity addition in a year and a whopping 200 per cent year-on-year growth."

Doubling our solar and wind energy capacity

The outcome of COP26 precipitated a global shift toward sustainability. It

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With the launch of the central rooftop portal, we anticipate increased demand from the residential sector.

► Vikas Arya,
Associate Vice President-Product Strategy,
Jakson Group



With BCDs, domestic manufacturers can compete with players from countries like China.

► Gautam Mohanka,
Managing Director,
Gautam Solar



Reliance on imported solar cells remains high, increasing overall module prices.

► Amit Barve,
BU Head - Solar,
Panasonic Life Solutions India Pvt. Ltd.

emphasised the importance of shifting away from fossil fuels to combat climate change. Commitments to reduce one billion tonnes of CO₂ by 2030, to reduce the carbon intensity of GDP by 45 per cent by 2030, and to achieve net-zero emissions by 2070 demonstrate the importance of green energy.

Barve explains that the government is launching a slew of initiatives to boost solar energy installation, including, but not limited to, increased activity in the utility sector. With tenders being published and finalised for installations in the coming years to increase the adoption of renewable energy, rooftop solar offers a central subsidy through the national portal for solar. "While industries are taking aggressive targets for net zero goals and adopting solar energy in every form, right from installations on their rooftops, ground space is available on campus," Barve added.

Arya added to the discussion by mentioning Jackson's

module manufacturing capacity of 600MW last year, which they funded independently, with plans to add another 500 MW this year. He believes that in phase 2 of the PLI Scheme, more manufacturers will be eligible for the solar subsidy, allowing Indian manufacturers to compete globally.

Mohanka mentions the government initiatives such as the waiver of Inter-State Transmission System (ISTS) charges and losses for inter-state solar and wind power sales. The government also intends to achieve a total capacity of 40,000MW from rooftop solar projects by 2022 through its grid-connected rooftop solar programme.

Implications of tax on solar imports

"We had our strategic manufacturing partners already aligned with us, and we were delivering for the last two years and would continue to deliver high-quality solar products to our esteemed partners and customers,"

Barve emphasised. However, because there is still a capacity gap between cell manufacturing and module manufacturing in India, reliance on imported solar cells remains high, increasing overall module prices.

The payback period of a solar system has increased in recent months as raw material prices have risen. Arya is concerned about this because high price volatility is also causing customers to postpone purchasing new solar systems. Furthermore, we anticipate an increase in demand from the residential sector with the launch of the central rooftop portal, which provides direct subsidies to residential customers.

Elaborating further, he added that the demand for high-efficiency modules of 550Wp is increasing rapidly. Simultaneously, the production of Polycrystalline Cells and Wafers is reducing, and this range is expected to be phased out in the coming months.

Mohanka said, "Though this will increase the cost of the raw materials to a certain extent, it is noteworthy that the imported materials will now get expensive and they will be at par with the Indian solar panels; thereby, the domestic manufacturers can now compete with players from countries like China."

Trends and developments ahead

Considering the past few years, the acceptance and need for solar have seen a consistent uptick. Increasingly, corporates globally and in India have been setting up decarbonising and Net-Zero

goals to adopt a sustainability-oriented eco-system-especially the energy-intensive companies.

Even with regulatory and price volatility in the market, Barve believes that clean energy's economic and environmental benefits pique corporate interest. Under the Paris climate agreement, nearly 200 companies have joined forces to advocate for "net-zero" emissions. In the coming years, energy storage will be critical in establishing renewable energy as a reliable and round-the-clock power source, further improving renewables' prospects.

Due to the increase in raw material prices, the solar system's payback period has increased in recent months. High price volatility is also delaying customer decisions for new solar systems. With the launch of the Central Rooftop Portal by MNRE on July 31 for a direct subsidy to residential customers, we expect a surge in demand from the residential sector.

The access to solar power resources has been steadily expanding and likely to escalate further, with more sectors preferring solar power as the sustainable source of their energy supply. There has been increasing support from the government. Additionally, industry players are working on including cutting-edge technologies like Artificial Intelligence (AI), blockchain, etc., in solar manufacturing. The prices of solar panel components and hardware have been decreasing significantly, and floating solar plants are also emerging for large-scale energy production at comparatively less cost. ⚡