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GLIMMER OF HOPE FOR SOLAR

Despite slowdown, the solar sector is expected to grow rapidly due to the government's doubling RE targets to 450 GW.

**- Supriya A Oundhakar,
Associate Editor**

Burgeoning greenhouse gas emissions have pushed India to make a commitment at Paris to reduce its carbon footprint by a third by 2030. As a part of this, the Indian energy sector has been witnessing a shift from conventional energy to renewable energy. In renewables, India's solar installations are set to hit a new record in 2019-20. Solar will continue to make rapid strides with installed capacity of 14 GW this year. Overall, the country is estimated to add nearly 16 GW of clean energy capacity in 2019 driven by large-scale solar projects.

The most significant trend in the solar industry sector is the fall in unit cost of solar energy and by most estimates, India has become the cheapest producer of solar power. This is a significant change that has happened over the last decade or so. According to The International Renewable Energy Agency, the cost of setting up solar PV projects in India has dropped approximately by 80 per cent between 2010 and 2018.

On the flip side, the Indian solar sector had witnessed a slowdown in tender and auction activity 2018-19 owing to certain economic policy decisions like imposition of GST and safeguard duty, which led to uncertainty over emerging tariffs. Thus, there was a bit of a slowdown in setting up fresh capacities in solar (and RE in general) since the run-up to the general elections in the first half of 2019. However, solar installations in India in the first quarter of 2019 increased a little at 1,737 MW, showing 4 per cent growth as compared to 1,638 MW installed in the last quarter of 2018. According to Mercom India Research, installations were down by 49 per cent year-over-year (YoY) compared to 3,377 MW installed in Q1 2018.

“It was a transitory slowdown and things are gradually falling in place. Initially we thought it to be of great help to the domestic industry, but policies like safeguard duty eventually presented formidable hurdles for the growth of the Indian solar industry,” opines Simarpreet Singh, Founder-Director, Hartek Solar.

What’s new for 2020

Considering the environmental fallout of overdependence on fossil fuels, renewable sources of energy, particularly, solar power will set the pace for the future growth of the power sector. The annual growth in electricity generation from renewables is already five times more than that as compared to conventional sources of energy.

According to Ashish Khanna, President – Renewables, Tata Power, India has targeted to achieve a goal of 450 GW of renewable energy by 2022. This was announced by the Prime Minister Modi during his recent visit



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**ASHISH KHANNA,
PRESIDENT – RENEWABLES,
TATA POWER**

to the US. So, we can expect action in solar to only get hotter in the coming years.

“The Indian power sector will continue to grow at a furious pace to cater to the ever-increasing requirements of fast-developing economy. Hence, power generation with a long-term perspective of

sustainability will be the focus in coming years,” states Singh from Hartek Solar.

Mid-year estimates of solar capacity are expected to grow around 9 GW this year which, if not made up in the next couple of years, will lead to nearly 30 per cent shortfall in meeting the 2022 targets. Hence, despite the current slowdown if the government is doubling the renewable energy targets to 450 GW, then it is only reasonable to expect that policy incentives will be more forthcoming, which will benefit the solar and the larger RE sector, adds Khanna.

The future of solar energy in the country would largely depend on achieving the ambitious solar power generation target of 100 GW by 2022. “Notwithstanding the slowdown we might face in the short term owing to a laggard tender process, the reduction in tariffs will eventually spur demand. Energy storage technologies will improve the efficiency equation and reduce costs,” adds Singh.

Rooftop solar (RTS) is gaining traction with declining cost of solar photovoltaic (SPV) systems and battery storage. At the end of the last financial year (FY19), the total installed capacity of RTS in



Hartek Solar’s rooftop project in Chandigarh

the country was around 4,375 MW, an impressive 72 per cent jump over the previous year. The rising popularity of RTS within the Indian power sector is also an outcome of the increasing share of green energy in the country. The share of renewable energy (solar, wind and biomass) grew to 22 per cent as on the previous financial year within the overall installed power capacity of 358 GW or 80 GW in total against 70 GW a year ago, of which solar power accounted for 30 GW.

CARE Ratings expects addition of 10 GW of rooftop photovoltaic installations by fiscal 2023 driven by commercial and industrial buildings and phase II of grid-connected RTS program.

Singh further informs that policy initiatives like viability gap funding of renewable energy projects and renewable purchase obligation will give impetus to the rooftop solar industry. The residential market is also expected to pick up in coming years on account of better policy support, lowering of solar capital costs, capital subsidies and substantial demand from the public sector.

Net-metering is also gathering steam, generating huge opportunity for rooftop solar industry. Net-metering can play a big role in pushing stronger adoption of renewable energy, particularly where the storage of energy produced is not an option. Net-meter decouples generation and consumption allowing time delay between the two. For example, the energy produced from a solar rooftop during the day can be used in the night.

“Net metering is expected to emerge as a game changer in tapping India’s rooftop solar potential



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**SIMARPREET SINGH,
FOUNDER-DIRECTOR, HARTEK
SOLAR**

by enabling households to save on electricity bills and earn from the power they produce. It is a major incentive for consumers as it allows them to feed unused solar power back into the grid and get handsome returns on it. Complemented by effective net metering policies, customised small-scale solar solutions will propel installations in years to come,” avers Singh.

Potential Growth

Rooftop solar holds the immense potential that drive the growth of solar industry in near future. Tata Power envisages huge growth opportunities in smaller generating units like rooftop solar. According to Khanna, in the residential sector penetration of rooftop is far lower than its potential. Rooftop solar covers 3.5 GW of the total 30 GW of solar installations deployed so far. Within this, residential rooftop contributes only 0.5 GW.

Rural India also holds huge potential for solar rooftops. For example, Tata Power Solar has already scaled up its rooftop solutions in 33 cities. By 2020, we expect it to be available in 100 cities. The plan for rural India is to set up micro-grids with micro-enterprises, initially in 200 villages and ultimately in 10,000 villages.

Going ahead, solar parks and mega solar projects will drive the growth in the industry. The United States-based Institute for Energy Economics and Financial Analysis (IEEFA) report lists 14 of the largest under-construction utility solar projects in the world, of which five are located in India. These are: Bhadla Industrial Solar Park (2,225 MW), Pavagada Solar Park (2 GW), Ananthapuramu – I Solar Park (1.5 GW), Kadapa Ultra Mega Solar Park (1 GW), and Rewa Solar Park (750 MW). Moreover, NTPC plans to set up a 5-gigawatt solar park in Gujarat, that would be the biggest in the country.

While Singh from Hartek Solar states, “With the cumulative solar capacity going up to 36 GW and the government going ahead with its plans to double the target for large solar parks from 20 GW to 40 GW, the market sentiment is upbeat. However, the government should tread with caution and desist from setting excessively aggressive caps for solar tenders as it could hamper the confidence of investors and interfere with the high-trajectory growth registered by the solar sector over the years.”

In view of the renewed focus on mega solar projects, real volumes have started pouring in. With the trajectory of bidding for the

remaining solar power capacity finalised as 20,000 MW for 2017-18, 30,000 MW for 2018-19 and 30,000 MW for 2019-20, achieving the 60 GW ground-mounted target should not be a problem, he adds.

Gearing Up

The solar industry is optimistic on account of the recent announcement of government for achieving a goal of 450 GW of renewable energy by 2022.

As India's largest integrated utility, Tata Power has committed itself to become the leader in clean energy. This commitment has been translated into a strategic intent that will take its total clean energy capacity to 40-50 per cent from the overall generating capacity. Today, out of our 10,957 MW of generating capacity, nearly a third

is already from clean energy sources, informs Khanna.

India is clearly committed to becoming a leader in the renewable energy space. This is our largest market and maintaining our leadership here also means that a more committed shift happens in favour of renewable energy and more so in solar, he adds.

Hartek is well geared up to tap the future growth in the industry. The company plans to register phenomenal growth in the solar EPC business by eyeing larger projects and cashing in on new opportunities in the upcoming solar parks. "We will be focusing on traditionally well performing states like Rajasthan, Gujarat and Madhya Pradesh, southern states

like Telangana and Karnataka, which have done phenomenally well in recent years, will also form the focus of our attention," informs Simarpreet Singh from Hartek Solar.

The company is building its rooftop portfolio in commercial, industrial and residential segments. "To make a mark in the residential domain, we will be relying on our customised rooftop solar kits equipped with a unique remote sensing technology. These kits are tailor-made for small-scale solar plants. You can link them with consumers' Wi-Fi or GPRS SIM card to get alerts on cleaning and maintenance as well as real-time data on energy generation and savings," informs Singh.

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