Recharge time for renewable power

Though they face headwinds, developers of green energy remain upbeat while gearing up for a mid-course correction, says **V Rishi Kumar**

It's not all tailwinds and sunshine for the country's renewable energy sector. It's actually time to take stock of the various issues impeding the sector's progress, say industry watchers.

Significantly, with 70 per cent of fresh power generation capacity set to come from renewable energy, a concerted effort is required for its sustainable growth, they stress.

Interaction with leading players in solar and wind energy shows that while they are bullish about the prospects, they expect some mid-course correction towards the larger goal of achieving the target of 175 giga watt (GW) by 2022.

Developers are faced with payment concerns, discoms are hard-pressed to honour payment commitments, large-scale auctions (giga watt plus) are getting tepid response, integration of renewables with fossil fuel-based projects has been tough, and old power purchase agreements continue to dog discoms. All of these, in turn, are making it tough for developers to raise funds.

The receivables for renewable energy companies from discoms have soared in some States, weakening internal liquidity and necessitating a reduction in their debt service reserve accounts, leading to pressure on their finances.

Experts believe that the renewable energy is now faced with the problems that fossil fuel power plants faced about a decade ago, including piling up of payments, policy hurdles and regulatory concerns in some cases.

Ramesh Kymal, Chief Executive Officer of Siemens Gamesa, says, "Barring a couple of discoms, several of them are delaying payments, causing hardship to developers of both wind and solar power projects. This has a spiralling impact on existing projects and on the setting up of new projects."

Problems, possible solutions

Making a case for optimum use of resource, Ashish Khanna, MD & CEO of Tata Power Solar, says, "In a country like India where almost 250 million people still don't have access to power and an equal number have erratic power, we have to understand that fossil fuels and renewables need to co-align with each other." Storing the extra generated energy well in advance through battery back-up will provide a continuous flow of energy to the consumers, he points out.

However, Divya Charan, Senior Analyst, Infrastructure, India Ratings, believes that integration of renewables, including hydro, is unlikely to be a concern in the next three to five years. In FY2019, the share of large hydro and remaining renewables as part of the total energy supply was 9.8 per cent and 9.2 per cent respectively, she says.

She feels improving transmission infrastructure is most critical to avoid grid congestion. "Apart from infrastructure to evacuate power, integration requires balancing supply with load, enabling solar during the day but increasing supply from other sources during night and managing high generation of wind energy during monsoon," she stresses.

Renegotiation of power purchase agreements (PPAs) has not resulted in reduction of tariffs. Falling prices in latest tenders could be one of the triggers for this. The other triggers could be excess power supply tie-up by the State, both renewable and non-renewable, and continuing losses of some of the discoms.

There has been the problem of slowing tenders and tepid response, with some of the tenders not getting fully subscribed. This could be due to some of the States having higher than required renewable power tie-ups and surplus energy compared to demand.

Kymal believes that, "Wind and solar hybrid energy is the best way to go forward. Unlike solar where most of the items are currently being imported, in the case of wind, we have a manufacturing capacity of about 10,000 MW. Focussing on wind projects and sourcing them locally will do good, for the country and its economy."

Referring to prices a couple of years ago, when tariffs had dropped to about ₹2.40 per unit, Kymal says that should not be taken as the benchmark. There were several reasons for the drop, including glut in equipment. The best price could be around ₹3 a unit, which is still nearly ₹2 lower than the average cost of power procurement by discoms.

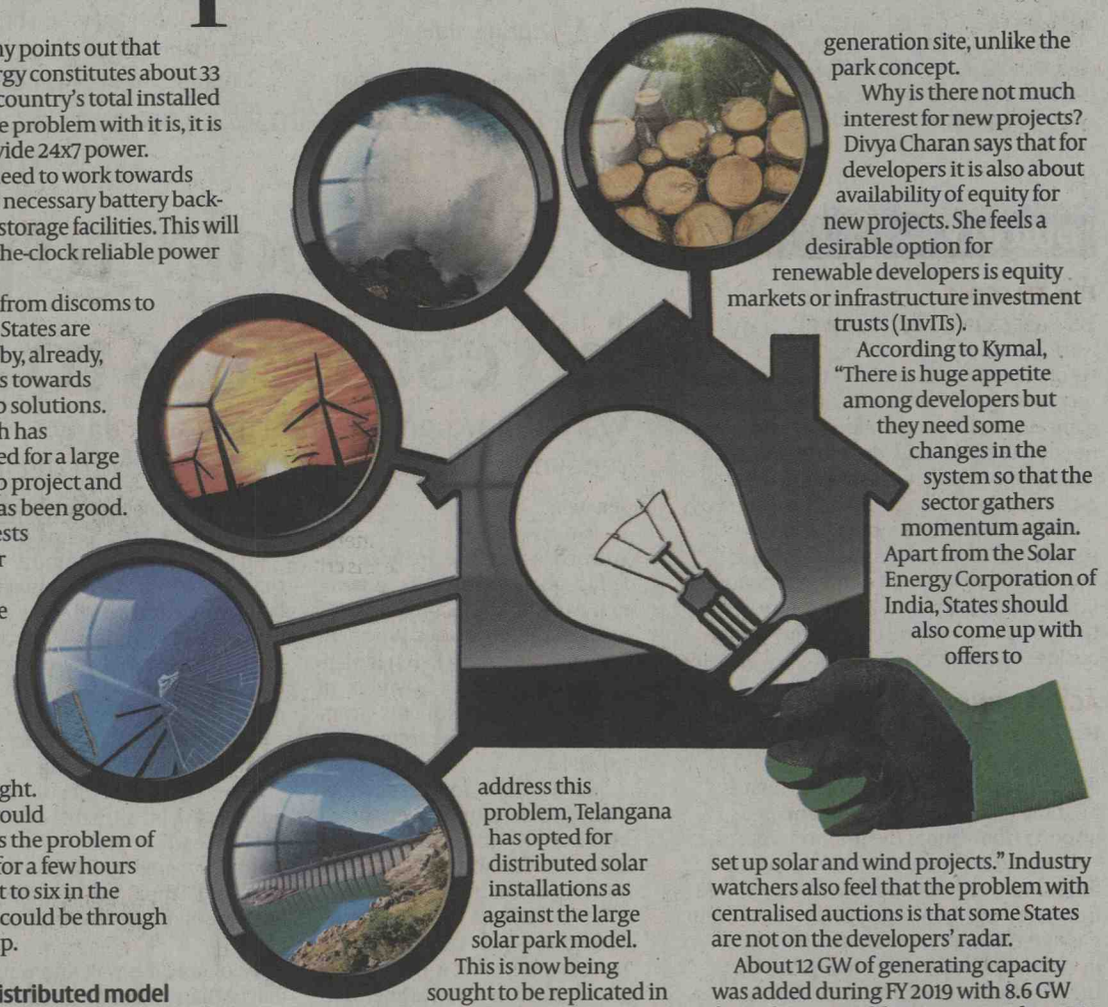
Khanna says recent policy developments in the Indian solar power space have opened up a plethora of opportunities and challenges for developers and manufacturers alike.

"We should not get fixated on low tariffs in the backdrop of safeguard duty policy," he argues.

A senior official of a leading renewable energy company points out that renewable energy constitutes about 33 per cent of the country's total installed capacity. But the problem with it is, it is not able to provide 24x7 power. Therefore, we need to work towards developing the necessary battery back-up or pumped storage facilities. This will ensure round-the-clock reliable power supply.

If the inputs from discoms to the Centre and States are anything to go by, already, there are moves towards battery back-up solutions. Andhra Pradesh has already tendered for a large battery back-up project and the response has been good.

Kymal suggests that while solar energy may be used to provide power from, say, 6 am to 6 pm, wind energy could back up with power from noon to midnight. The discoms would have to address the problem of power supply for a few hours from midnight to six in the morning. This could be through storage back-up.



Discoms for distributed model

From a discom perspective, managing the surge in renewable energy production and sudden drop is a matter of concern.

"Managing a dynamic and variable load pattern requires storage back-up to meet the discom demand profile. To address this problem, Telangana has opted for distributed solar installations as against the large solar park model. This is now being sought to be replicated in other States, says G Raghuma Reddy, CMD of TSSPDCL. Distributed solar or wind power installations cut down on transmission and distribution losses and there is no need to further bolster the transmission network. This model helps consume power close to the generation site, unlike the park concept.

Why is there not much interest for new projects? Divya Charan says that for developers it is also about availability of equity for new projects. She feels a desirable option for renewable developers is equity markets or infrastructure investment trusts (InvITs).

According to Kymal, "There is huge appetite among developers but they need some changes in the system so that the sector gathers momentum again. Apart from the Solar Energy Corporation of India, States should also come up with offers to set up solar and wind projects." Industry watchers also feel that the problem with centralised auctions is that some States are not on the developers' radar.

About 12 GW of generating capacity was added during FY 2019 with 8.6 GW from the renewable segment and 3.5 GW in the thermal segment. The solar sector added 6.5 GW and wind, in spite of huge capacity and potential, added 1.6 GW.

All this only underlines the fact that there is a case for next generation reforms in the sector.