

# Industry flags high costs, infra gaps as roadblocks to renewable push

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PHOTOS: PRIYANKA PARASHAR

India's renewable energy sector has witnessed growth but continues to face several challenges, including high capital costs, gaps between green energy generation and transmission, and high storage expenses, key representatives of the industry said during a panel discussion at the *Business Standard* Infrastructure Summit on Thursday.

The panellists — Vaishali Nigam Sinha, co-founder of green energy firm ReNew, Gauri Singh, deputy director-general of the International Renewable Energy Agency, and Prashant Choubey, president of renewable energy company Avaada Group — were speaking with A K Bhattacharya of *Business Standard*.

Citing a few roadblocks for renewable energy generation, Sinha said: "We get over 300 days of sunlight, which means there is enough opportunity to put up solar farms, but land acquisition is an issue. The cost of capital in India has been on the higher side, which has been a deterrent for global institutions to invest more in the sector. Another roadblock is that our pace of energy generation is faster than transmission development."

Elaborating that the country needs to put more money into the transmission and storage network, Singh said, "As we add more renewable capacity, we need more investments in the transmission and storage network. If storage solutions at affordable costs are not forthcoming, it will stymie the push to add capacity on the supply side." Singh added that while the high weighted average cost of capital is a roadblock, the currency risk hedging also adds to the perception that prevents investors from investing in the country.

Choubey said the weighted cost of capital is an important factor. He also pointed out that decentralisation and democratisation are other major challenges.

India has set a target of 500 gigawatt (Gw) of renewable energy capacity by 2030. However, the installed base stands at around 225 Gw.

On the challenge of storage specifically, Singh said that the country needs to find solutions suitable to the local context while also being able to trade with neighboring countries.

"In India, we have a huge potential for pump



(From left) Vaishali Nigam Sinha, cofounder, ReNew; Gauri Singh, deputy director-general, IRENA; and Prashant Choubey, president, Avaada Group, at *Business Standard* Infrastructure Summit in New Delhi on Thursday

storage, and it's a solution that can work well in the context that we are in," she said.

She added that there should also be incentives to shift off power load (such as using washing machines) to non-peak hours, which would eventually require less energy storage. Like Singh, Choubey said that while India currently has around 4.8 Gw of pumped storage capacity, the country's requirement is far higher. "India is going to need a humongous amount of storage in the system. We need to look beyond peak arbitrage, and the storage system needs to be a real anchor of a grid balance," he said.

Sharing an optimistic outlook, Sinha said storage remains a crucial factor for renewable energy growth, with significant innovation already taking place in the sector. She added that government incentives are encouraging advancements in storage technologies. This will not only help integrate more renewable power into the grid but also strengthen India's clean energy transition in the long run.

Speaking on tariffs, both Singh and Sinha pushed for the need to innovate. "What you see right now is mostly a flat tariff in most of the places. In several western countries, aggregators have brought in new business models

around demand aggregation that improve the grid, benefit discoms, and create new business opportunities," Singh said. Singh added that tariffs can be a powerful instrument in catalysing demand-response models.

Sinha said there is scope for reforms. "If we see how the wind and solar sector has evolved, we had the feed-in tariff, and then we moved to competitive bidding. So, it was enabling. But now, that has become pretty standard and settled," she added.

Regardless of the challenges, the panellists highlighted factors such as a supportive policy environment, targeted incentives, and strong political commitment that are driving renewable energy adoption in the country. "Our policy evolution with respect to providing incentives, whether wind, solar, or green hydrogen, has been in tandem with issues that were coming up as businesses were trying to get into this area. India has had an enabling policy environment, and we have made good progress," Sinha said.

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