

Transmission lags behind RE power curtailment: MNRE Secy

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THE CURTAILMENT of renewable energy (RE) power in Rajasthan is expected to ease significantly with the commissioning of the transmission line in Fatehgarh, Santosh Kumar Sarangi, Secretary at the Ministry of New and Renewable Energy (MNRE), told *The Indian Express*.

Sarangi said RE curtailment is largely driven by a mismatch between the pace at which renewable projects are commissioned and the time required to build transmission infrastructure.

Around 4 gigawatt (GW) of RE capacity was earlier lying without connectivity. However, with the commissioning of the Khetri-Narela transmission line in December, part of this capacity has now been evacuated.

"The remaining 2 GW will also be evacuated once the transmission line in Rajasthan's Fatehgarh gets commissioned. Within a month, that line will be ready. After that, we do not foresee any curtailment in Rajasthan," he said. Renewable energy de-



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SECRETARY, MNRE**

velopers in Rajasthan have increasingly flagged curtailment during peak solar hours. According to Sarangi, this is a structural challenge linked to the faster execution timelines of renewable projects.

"Evacuation of RE power is a major challenge because renewable power plants can become operational much faster than conventional thermal power plants," he said. "A coal-based power plant typically takes five to six years to become operational. So, the transmission system used to get ready by that time. But now, a solar power plant is coming up within anything between one to two years. A wind turbine is getting ready within a one-year period, whereas the transmission system is still taking three to

four to five years," he added.

Sarangi explained that delays in some key transmission projects in Rajasthan aggravated the curtailment problem.

"Some of the transmission lines which were getting ready from Rajasthan were slightly delayed. The Khetri-Narela line which was delayed and eventually got operational in December. So, when that line is not ready to evacuate power, it will lead to curtailment," he explained.

He added that large-scale integration of RE will require a proportional expansion of transmission infrastructure. "So, if you want to integrate more and more RE, you will also have to be ready with more transmission lines to evacuate power from RE

zones to the non-renewable energy load centers," he said.

Sarangi said Power Grid Corp. of India is addressing the issue through its advanced tenders. "Because once we declare a certain area as a renewable energy potential area, then irrespective of the number of applications received, Power Grid is going ahead," he said.

"There is a national committee on transmission headed by CEA. So, they take a decision to go ahead on a particular project irrespective of whether sufficient applications have come up," he added. Transmission connectivity has emerged as a key bottleneck for the RE sector.

In November, the Central Electricity Regulatory Commission (CERC) noted that around 31.8 GW of RE capacity had already been granted connectivity but was yet to secure power purchase agreements (PPAs), resulting in underutilisation of transmission infrastructure. The lack of PPA signing has become a major hurdle for the sector, with at least 42 GW of RE capacity still without PPAs. In November, rating agency ICRA flagged concerns over declining project

awards and delays in PPA signings, stating that these trends "reflect concerns on execution related to available transmission connectivity for the RE sector."

Meanwhile, India's RE capacity is expanding rapidly. The country added 44.51 GW of renewable capacity during the year till November, nearly double the 24.72 GW added during the same period last year. As a result, total installed RE capacity reached 253.96 GW in November 2025 — an increase of over 23% from 205.52 GW in November 2024. At the same time, India's national power transmission network crossed a major milestone on January 14, surpassing 5 lakh circuit kilometres (ckm) of transmission lines (220 kV and above). This included the commissioning of a 628 ckm of 765 kV transmission line from Bhadla II to Sikar II substation for evacuating renewable power from Rajasthan.

"With the commissioning of this transmission line, an additional 1,100 MW of power can be evacuated from the RE zones of Bhadla, Ramgarh and Fatehgarh Solar Power Complex," the government said.