

Renewable led transmission schemes in the works

We hosted a meet with Mr. Goutam Roy, Chief Engineer, CEA and Member Secretary, National Committee on Transmission. Key insights are highlighted below:

- Awarding of transmission schemes has been facing issues due to changes in state policy, land issues, and lack of interest from generators.
- Developer interest in the area of Rajasthan has been high. Expect transmission schemes worth INR94b in Rajasthan to be awarded in the next two months.
- With the focus on RE, large transmission schemes are being worked upon in the regions of Khavda (Gujarat), Ladakh and Rajasthan.

Issues faced in the awarding of transmission schemes

- The government has plans to install 175GW of renewable capacities by 2022 and 450GW by 2030. This will drive the need for transmission evacuation systems.
- About 66.5GW of interstate transmission schemes was identified for implementation, with ~38.5GW expected to be implemented by Dec'21. Awarding for these transmission schemes though has seen issues due to changes in allocation policy, land issues and lack of interest from generators.
- Projects such as Solapur, Wardha and Khandva have been put on hold due to lack of interest from developers. Schemes within Bidar, Anantpur and Tirupur have faced land allocation issues.
- Schemes in Gujarat needed to be re-allocated to Khavda due to changes in land allocation policies of the state government.

Mr. Goutam Roy
Chief Engineer, Power System Planning & Appraisal at the Central Electricity Authority

Mr. Roy also serves as Member Secretary on the National Committee on Transmission (NCT). As part of his current role, he is involved in the planning of transmission systems. This includes proposing and authorizing construction of transmission projects under TCB and also reviewing possible constraints within interstate and inter-region systems

Awarding of projects in Rajasthan expected soon

- Developer interest has been high in Rajasthan. Expect transmission schemes worth INR94b in Rajasthan (under bidding) to be awarded in the next two months.
- Awarding of INR5.5b in Gadag may happen in a phased manner. A further INR6.4b of schemes in Rajgarh may be re-looked at the interest seems higher in Rajasthan.

New RE generation locations being looked at

- New RE generation locations are being contemplated at Khavda (Gujarat), Ladakh and Rajasthan.
- At **Khavda (27.5GW)**, clearances for 10GW have been obtained and could be awarded soon. Connectivity applications for 3GW have been received. Another 17GW of projects worth INR180-190b are being looked at. Matching of generation and transmission capacity though is critical and would need to be considered before awarding.
- Grid management would also need to be looked at. Large capacities coming up in one region may pose a risk in managing the grid. If a fault occurs, it can have strong implications on the system.
- In **Ladakh (10GW)**, transmission for 10GW of capacity would take time and come up by 2025-26 at a potential cost of INR220-250b. Awarding for the same will happen in the next 1-2 years. The plan is to increase RE capacity in Ladakh to 30GW in a phased manner.
- In **Rajasthan (10GW)**, transmission for 10GW of capacity, with a potential cost of INR160-170b, may come up by FY23-24. Awarding for the same would happen by FY22. Discussions are also ongoing to understand the type of transmission line to be implemented.

Other points

- With rising renewables in the western region, power is flowing from the west to the eastern region. The flow from eastern to central, may thus be comfortably de-loaded. Studies are being done to understand utilization and locations where loading/de-loading can be undertaken. Incremental transmission capex, proportionate to capacity, may be slightly lower.
- The government has put up guidelines and most transmission systems would be awarded in TBCB, except for special category or urgently needed. Works on the same can be awarded on RTM.

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