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POWER

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Focus shifting to hybrid and RTC power

- **India to add 20GW of RE capacity in FY24 and power producers now pursuing hybrid and RTC solutions, per ICRA**
- **Storage solutions in the spotlight with several companies announcing plant setup within 7-8 years**
- **Solar segment remains dependent on China for key inputs; backward integration plans by Indian players still some time away**

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We attended a call hosted by ICRA on the Indian renewable energy (RE) sector. Key takeaways:

20GW RE capacity expected in FY24: ICRA expects India to add 20GW of RE capacity during FY24, despite YTD addition of only 8GW. The country's total RE capacity, including hydro, stands at ~179GW as of Oct'23.

Focus shifting to hybrid and RTC power: Given concerns about the viability of 24-hour power supply from RE, producers are now shifting focus to hybrid and round-the-clock (RTC) supply solutions. Distribution companies (discoms) take up a bulk of the supply and need 24-hour dispatchable power that projects awarded over the last few years have been unable to meet. The tariff of Rs 4.1/kwH at which power producers have recently bid for hybrid RE projects is comparable with conventional power and lower than spot power, making them a viable option.

Storage solutions gaining momentum: A large storage capacity at reasonable cost is a requisite for the shift to renewables. Most power companies have announced plans to set up pumped storage plants (PSP) and battery energy storage systems (BESS) over the next 7-8 years, with PSPs seeing stronger traction. On the BESS side, battery prices have softened in the last six months, but competitiveness against PSPs is still unknown.

Solar supply chain still dependent on China: India only assembles solar panels and is dependent on China for most of the raw materials required in the polysilicon-ingot-wafer-cell-module of the supply chain. Several domestic developers have announced backward integration capacities, but these are expected to take time to be commissioned. About 70% of solar plant cost is incurred on equipment, which makes projects using Chinese parts more competitive.

ISTS waiver a key factor for RE: The waiver of inter-state transmission system (ISTS) charges has raised the competitiveness of RE, but this facility is available only for projects commissioned till Jun'25. For projects beyond this date, we estimate that tariffs could rise 8-10% unless this benefit is extended.

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