

Repowering offers big biz for turbine makers

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Pune, July 19: Opportunity knocks on the door of the Suzlon Group. As it celebrates 20 years in business, the turbines it started with are ready for repowering. The government has floated a draft policy for repowering the wind projects, which will provide the required boost. It has been identified as the future growth driver for companies along with offshore and wind-solar hybrid farms.

Repowering is either rebuilding a turbine by replacing parts or building a new one. For Suzlon, the old wind turbines are located at high wind sites, making repowering a lucrative option. With land having been developed and grid infrastructure in place, it is an easier option to expand capacity at existing sites with machines that have high plant load factor and efficiency.

The country has set a target of generating 60 GW wind energy by 2022. For this, the country will need to double the capacity. This depends on the availability of wind sites, grid connectivity and land availability. Repowering of existing wind projects is being considered as one of the ways to meet this target in addition to fresh capacity addition.

This is not just an opportunity for Suzlon but for every other wind turbine maker that has an ageing fleet. Suzlon has 100-plus wind farms with installed capacity of 9.50 GW, spread across nine states. According to Tulsi Tanti, CMD of Suzlon Group, there is an opportunity to repower their wind turbine generators across Maharashtra, Gujarat and Tamil Nadu, and replace old turbines with new machines with upgraded technology. The ministry of new and renewable energy (MNRE) has come up with a draft policy for supporting repowering, he said.

Suzlon's first wind farm in Dhank, Gujarat, completed 20 years of operations. It has 10 wind turbine generators (WTG) of 270 kW and eight 350 kW generators. As of March 2016, the total wind installations in Gujarat stood at 4,037 MW, of which 1,842 MW (around 46%) has been contributed by Suzlon.

Suzlon's wind farms in Satara have the maximum number of turbines in one cluster. Suzlon has 146 customers on this site including Bajaj Auto and Tata Motors. In Maharashtra, Suzlon has a cumulative market share of 44.10%. It has installations of 2,054.70 MW and 1,956 wind turbine generators.

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Of these, Suzlon has 556 WTGs of 350 kW capacity, 37 WTGs of 600 kW and seven 1,000 kW capacity WTGs. Only 124 of the total 824 WTGs are above the 1 MW capacity. Suzlon started off with wind turbines of 270-kW capacity and has gone on to 2.1 MW machines. The company is in the process of developing up to 3 MW turbines.

JP Chalsani, CEO at Suzlon, said Suzlon has the second-largest operating fleet under service after NTPC with 15,500 MW. "Only NTPC operates more than that across any type of fuel," Chalsani said. India has an installed base of 26.8 GW (March 31, 2016) in wind. The country started generating wind power in 1990. According to the MNRE draft policy, most of the wind turbines installed in 2000 are of capacity below 500 kW and are at sites having high wind energy potential. The ministry estimates that over 3,000 MW capacity installation are from wind turbines of 500 kW or below. To optimally utilise the wind energy resources, repowering is required. The government is considering incentivising repowering. Wind turbine generators of capacity 1 MW and below would be eligible for repowering under the proposed policy.

Incentives suggested for repowering include an additional interest rate rebate of 0.25% by IREDA, extending the same benefits to the new wind projects such as accelerated depreciation or generation-based incentives to the repowering project. This is to encourage replacement of WTGs set up before 2000 and replace old turbines with new ones. Taller tower and longer rotor blades have a significant difference in power generation. It will lead to an increase in electricity production and reduce the levelised cost of electricity.