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- Anil Sardana,
CEO & MD, Tata Power

Adequate coal supply resulting in power surplus

Tata Power is a major integrated power company in India with a significant international presence. The company has an installed generation capacity of 9,432MW in India and a presence in all the segments of power sector, namely fuel and logistics, generation (thermal, hydro, solar and wind), transmission, distribution and trading. Tata Power is one of the largest renewable energy players in India and has developed the country's first 4,000MW Ultra Mega Power Project at Mundra (Gujarat) based on super-critical technology.

Tata Power is also a pioneer in the renewable energy space in India. Tata Power Renewable Energy Ltd (TPREL), recently completed the largest transaction in the renewable space in India, when it acquired Welspun. With Welspun Renewable Energy Pvt Ltd (WREPL) acquisition the portfolio of TPREL grows to about 2,300MW making it one of the largest renewable energy companies in India. TPREL's present operating capacity is 294 MW, comprising 240MW wind and 54MW solar, located in the states of Maharashtra, Gujarat, Madhya Pradesh, and Rajasthan.

The power sector has been growing tremendously and country is expected to have a surplus of 3.1 per cent during peak hours and 1.1 per cent during non-peak hours during 2016-17, as per the data from the Central Electricity Authority (CEA).

"Power surplus scenario is one of the big achievements. India can meet its power demands without further capacity addition for the next three years," states an assertive Anil Sardana,

CEO and MD, Tata Power. Coal output, which was stagnant for years, has increased significantly helping many stranded power plants start generating electricity. The renewable energy capacities have not only contributed to meet the power demand, but also the peak power requirements. "Energy efficiency improvements coupled with demand side management has helped reduce the energy intensity of industries and this has reduced losses to great extent. The discoms are trying to reduce their T&D losses that have helped in more power availability," he adds.

Improved coal supply

As per Sardana's view, the 'surplus' power scenario can be attributed to the improved coal supply situation as well as the rapid expansion in renewable energy capacity building. He informed, in May 2014, as many as two-thirds of coal based power plants were having critical coal stocks, meaning less than 7 days of coal stock. Recovering from such a dire situation, the power plants have ample coal availability now. "While the demand for electricity has remained constant, the government's aggressive capacity push adequate coal supply to thermal plants has resulted in surplus power generation. That said, poor financial health of state discoms and transmission and distribution constraints are still resulting in power cuts across the country, he informs."

He adds, "The rapid growth and proliferation of renewable energy is another primary reason for this transformation." The government has laid out plans to add 175GW of renewable energy by 2022. Taking the cue, private sector is investing significantly into building green energy capacity.

Revealing on Tata Power's contribution to the transformation Sardana said, "Company is also in the process of implementing nearly 400MW of renewable power projects at various locations. In order to aggregate its clean and renewable energy portfolio, Tata Power has initiated the process of carving out its 500MW clean energy assets from its books into TPREL. TPREL is seeking to grow its renewable portfolio in India and in select international markets through organic and inorganic opportunities."

Tata's turnaround story

Tata Power has been part of India's growth story since 1915 with establishing India's first large hydro-electric project in Khopoli, Maharashtra. The company has evolved over the years and it has tried to bring in the best technologies for power generation.

Tata Power's Mundra UMPP project is a revolution in the power sector. It is the first live project amongst the 4 UMPPs awarded by the government till date. The 4,000MW Mundra UMPP is the first of the UMPPs that heralds the entry of 800MW super-critical boiler technologies in India, which is environment friendly and efficient and is arguably the most energy-efficient, coal-based thermal power plant in the country. "The project supplies power to consumers from five states – Gujarat, Rajasthan, Maharashtra, Haryana and Punjab. The design efficiency results in lesser fuel consumption per MW power output in 800MW super-critical units than in 500MW sub-critical units. The plant deploys imported design coal called Melawan coal which is environment friendly and low in sulphur content," reveals Sardana.

Tata Power has also reiterated its commitment to clean energy by increasing the share of non-fossil fuel energy to 30-40 per cent by 2025, up from its earlier target of 25 per cent. This move is in line with the government's set target of 100GW from solar and 60,000MW from wind. "Tata Power recently completed acquisition of WREPL and its subsidiaries. The acquisition included 1,141MW of renewable power projects comprising about 990MW solar power projects and about 150MW of wind power projects," he adds.

Multifold growth

Over the next few years, India's focus would be largely on renewable energy space as the government has shown great promise towards

promoting renewable energy. A World Energy Outlook report of the International Energy Agency says that by 2040, over 50 per cent of India's new generation capacity will come from renewable and nuclear energy. Tata Power has a well-defined growth plan and is pursuing actions towards achieving the same. The company aims to have a significant contribution from clean power sources. Towards this end, the company has arranged its renewable assets portfolio of wind, solar and production gases by consolidating them under the renewable arm namely Tata Power Renewable Energy Ltd, a wholly owned subsidiary of the company. "Tata Power has ambitious plans to keep fuelling its multi-fold growth across the power value chain. For the next 3 years, the company has sketched out a CAPEX of roughly at the rate of Rs. 2,500 crore per annum. The CAPEX plans would be commensurate to the growth plans and would be competitive than the average market prices, as has been shown at the recent capacity additions in Mundra and Maithon," informs Sardana on the business prospects.

Eye on solar

Solar power is a focus area of the government with 100GW installations being targeted by 2022. In line with the government's target, Tata Power will also focus on solar. Tata Power has set an aggressive target of 20,000 MW of total capacity by 2025. "We have recently revised the share of non-fossil fuel based capacity up to 30-40 per cent by 2025, of which solar power will be an important component. As the conventional grid connected and rooftop projects continue at its own pace, we also need to look at various innovative technologies to achieve the target for 100GW of solar," shares Sardana.

A floating solar power plant can help address the problem of land availability in India. "Tata Power has already achieved proof of concept by installing a small sized plant on its lake in Lonavala. New technologies like third generation photovoltaic have reached incremental efficiencies in lab tests; we need to look at these technologies in order to have better output too," informs Sardana. To achieve its objective, the company is exploring multiple options, both greenfield and acquisitions, to be able to capture the market for both solar and wind based generation. The company is also in the process of acquiring suitable land parcels in the states of Maharashtra, Rajasthan, Gujarat, Andhra Pradesh and Karnataka to develop solar and wind projects. ⚡