



Tata Power



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Anil Sardana, MD & CEO, Tata Power shares his views with **Sandeep Sharma** about the major milestones achieved by his company in its century old journey, business opportunities in the renewable space, key challenges faced by the industry, policy changes required, compensatory tariff issue, success in the power distribution segment, revival of the debt ridden discoms, current project pipeline and the targeted capacity by 2017. Edited Excerpts...

► **Could you share with us about the major milestones achieved by Tata Power in its century old journey?**

Key Milestones over the 100 years

- 1915 – First Hydroelectric power generating station commissioned at Khopoli with an installed capacity of 40 MW, which was subsequently upgraded to 72 MW.
- 1922 – Commissioned another hydro power station at Bhivpuri with an installed capacity of 40 MW, subsequently upgraded to 72 MW.
- 1927 – Third Hydro power station of 90 MW capacity comes up at Bhira, which was subsequently upgraded to 150 MW.
- 1965 – First thermal unit of 150 MW comes on line at Trombay- the first of its kind in the country.
- 1984 – India's first 500 MW generating unit with multi fuel burning capability is commissioned at Trombay.
- 1994 – A gas based 180 MW capacity combined cycle plant is commissioned to provide quick –start capacity to Trombay thermal station and to ensure reliable and uninterrupted supply for essential services in Mumbai.
- 1996 – The 150 MW pumped storage unit at Bhira was commissioned. 67.5 MW thermal power plant at Jojobera (Jharkhand) comes into existence.
- 2001 – Tata Power ventured into the renewable source of

power generation with a 17 MW wind farm at Supa, Maharashtra.

- 2002 – Tata Power entered into a public-private partnership namely “Tata Power Delhi Distribution Limited” with Delhi Vidyut board for distribution in North Delhi.
- 2003 – Tata Power enters into a Public Private partnership with Power Grid Corporation of India Ltd, to develop a 1200 km long transmission line to bring electricity from Bhutan to Delhi.
- 2012 – 1050 MW Maithon Power Project was commissioned in a public private partnership with Damodar valley Corporation. This led to Tata Power becoming the first Indian power company to have PPPs (Public Private Partnerships) in generation, transmission and distribution. First 25 MW solar power plant in Mithapur (Gujarat) was commissioned.
- 2013 – Tata Power implemented the first 4000 MW Ultra Mega Power project of India at Mundra, Gujarat with 800 MW technologies, and the first of its kind in India

► **Why it took so long for the company to touch an installed capacity of 9183 MW despite having the first mover advantage in the Power sector?**

Tata Power is India's largest integrated power company with a significant international presence. The company has an installed generation capacity of 9183 MW in India and a presence in all the segments of the power sector: generation (thermal, hydro, and solar and wind), transmission, distribution and trading. With its track record of technology leadership, project execution excellence, world-class safety processes, customer care and driving green initiatives, Tata Power is poised for multi-fold growth and committed to 'lighting up lives' for generations to come.

The power sector has seen many challenges over the last 10 decades. While passage of the Electricity Act 2003, addressed some concerns of the industry, many issues are yet to be addressed. Today, the sector is reeling with several challenges. Poor financial outlook of Discoms where the losses have been increasing to levels far higher than previous years is a matter of great concern. Power distribution still remains a segment that needs significant reform-intervention. Tata Power has exhibited exponential growth despite the challenges faced by the power sector.

Shortage of domestic coal in the country has also been a major concern for the power sector as a whole. It has also led to apprehensions that the ambitious capacity addition targets of 90 to 100 GW in the upcoming twelfth plan period (2012-17) may not be met and may also cause avoidable stress on assets already built/committed the private sector. Further, the rise in imported coal fuel prices due to regulatory issues in global markets including Indonesia would also need to be dealt lest developers would not create downstream investments here in India to use imported coal. This is in addition to the huge deficit in supply of domestic gas vis-a-vis projections and thus bringing back the discussion that the

country needs a well-planned “Energy Security Policy”, lack of which has led to haphazard development. Besides, India needs to create an enabling policy framework wherein use of such imported fuels would be dealt with properly specially in terms of its commercial dispensation.

Power projects announced by various players are moving at a snail pace as land acquisition, regulatory clearance have not been facilitated in a manner the industry would like to happen. The rate of growth of the transmission network during the past decade has been just at about 6-7%.

Further policy directions do not indicate any significant development with respect to addressing peaking shortages. The National solar mission has presented an opportunity to grow the solar generation portfolio but strengthening of REC mechanism is expected to help manage the liquidity in the renewable energy market. Also, despite expectation of policy changes to allow private sector in Nuclear, there was no real development on the subject.

It is also looking at a significant international presence in years to come. It has an existing business presence internationally through its stake in coal mines in Indonesia and also through its logistics and shipping company- Trust Energy in Singapore. In addition to fuel and logistics, Tata

Power is working towards getting up power plants outside India. Tata Power has a JV with the Royal Government of Bhutan for a 114 MW from Dagachhu Hydro Project with Druk Green Power Company. Tata Power along with Norway-based SN Power has an exclusive partnership to develop hydropower projects and is currently developing 600 MW Tamakoshi-3 in Nepal. Geothermal energy has also been a key focus area for the company

outside India. Tata Power is pursuing this through an investment of \$50 million for a 10% stake in an Australian company Geodynamics. Recently, Tata Power along with Australian company Origin Energy won the bid for a 240 MW geothermal project in Indonesia. The Company through its set up in South Africa is also working towards setting up additional power projects in Africa and Indonesia in the near future.

► **With the Government focus mainly shifted towards power generation through renewable sources, how well is Tata Power geared up to grab business opportunities in the renewable space?**

Tata Power, together with its subsidiaries and jointly controlled entities, has an installed gross generation capacity of 9183 MW of which clean energy portfolio is 1674 MW, making it one of the largest renewable energy players in India. The Company, through its 100% subsidiary, Tata Power Renewable Energy Limited (TPREL), recently commissioned a 44 MW wind farm in Madhya Pradesh, making it the Company's fourth wind asset. TPREL also has a further 500 MW of wind capacity under development and construction in the states of Gujarat, Andhra Pradesh, Madhya Pradesh and Karnataka.

Further reiterating its commitment to clean energy, Tata Power recently increased the share of renewable energy



Solar power plant of 25 MW in Pallaswadi, Maharashtra

output 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 100 GW from solar and 60,000 MW from wind. Though solar is a very small part in our total portfolio, it will increase significantly over the period as the government is expected to bid out large scale projects to meet its target. For wind, on the other hand, we will continue to look at opportunities as and when they come.

We are exploring multiple options, both Greenfield and acquisitions, to be able to capture the market for Solar, Wind, and hydro based generation. Every year, Tata Power strives to add about 150 MW of Wind, and 30-50 MW of solar, depending on the market opportunities. If opportunities are more, then we add more, and vice versa. 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.

► What are the key challenges faced by the Power sector players in India?

Today, the power sector is facing various challenges. Poor financial outlook of Discoms where the losses have been increasing to levels far higher than previous years is a matter of great concern as the buyer of merchandise has to be solvent and efficient, failing which the fiscal health of all associates in the value chain will get impacted and it would lead into vicious & unviable circle of uncertainty. Power distribution still remains a segment that needs significant reform-intervention and a combination of tariff increases, distribution reforms, open access and enforcement of the 'obligation to service' is required going forward.

Despite huge coal reserves in India, the domestic power sector has faced coal shortages and has resorted to import to meet its requirements. This shortage may result in increasing non-utilisation of assets that are already built and would distract new capacity additions resulting in targets being missed. In addition, policy changes in Indonesia and Australia have significantly escalated the prices of imported coal thus making generation unviable for imported coal based power projects to function. Another major challenge to the sector is the shortage of natural gas in India. This shortage has stranded gas-based power projects with a combined capacity of around 18,903.5 MW, accounting for 9.13 per cent of total generation capacity. Besides Fuel, slow pace of distribution reforms is another key concern. The third key impediment to growth of the power sector is the commitment of states to support the developers in obtaining clearances, land acquisition free of encumbrances, etc. Without states engagement, developers would find it difficult to bring to fruition, their investments on ground.

Also, due to linkage unavailability, land-availability issues and delays in various clearances, the pace of growth in India is slow. The ability of the merchandise buyer to off take power and pay for that power is the biggest risk to grow in generation as of today, i.e. the merchandise buyer has to be liquid and has to give you the assurance that I will lift up that power. Power generation in India has primarily stayed at the hands of state owned enterprises i.e. 89% has stayed at the hands of state owned enterprises. If power generation is looked at from any

other business perspective, one will automatically get the answer as it is not difficult at all. It has been made difficult because it is at the hands of the government. Government wanted to keep away from it, therefore they got regulator. However, they have appointed such regulators that will take government orders. This ultimately becomes convoluted because your objective is to say, that I want to create a perception that it is not under my control but at the same time I want to control it.

► What kind of policy changes in the Power sector can ensure healthy growth?

There is a need to evolve a robust energy security policy for the country so that guidance be given to all State Regulatory commissions to plan bulk supply procurement in line with basket of fuels that meet Indian's energy security needs. It is also important that stranded capacities and therefore stranded equity and debt is made productive failing which the plans to economically support the infrastructure growth without power would be a distant dream. Coal linkages and tariff rationalization is an important aspect that the government should look at.

The government must also aim at developing a comprehensive national energy security policy, conveying use of portfolios, basket of fuels and must issue guidelines as to how regulators must ensure that at each state level they build the tariff using bulk sourcing of power based on prudent mix of portfolio of fuels comprising of both imported as well as domestic.

The coal sector needs to be opened up to private and foreign investments to bring in international player's technical and financial capability in exploration and mining in order to scale up production quickly and efficiently. There is also a pressing need to introduce new technologies and modern mining methods to improve productivity and to increase scalability and sustainability of mining operations.

Renewed focus on Ultra Mega Power projects for thermal and solar can lead the way to fill the demand supply gap. Focus on new technologies like onshore wind can be crucial in meeting capacities. However, all the policies should be made conducive for attracting private investments.

Power distribution is a segment that needs significant reform-intervention. Going forward, a combination of tariff increases, distribution reforms, open access and enforcement of the 'obligation to serve' is required. Slow pace of distribution reforms is another key concern. The distribution segment caters to 200 million consumers with a connected load of 400 GW, comprising one of the largest customer bases in the world. However, high financial losses of the discoms are hampering not just the electricity distribution but are almost becoming a question mark for generation capacity addition in India.

► In the absence of any relief so far from the CERC, how long would it be viable to continue at the current tariff structure as far as Mundra UMPP is concerned? What kind of relief or solution are you seeking in this regard?

CGPL reviewed and reassessed the recoverability of the carrying amount of its assets at Mundra, consequent to change in the estimates of future cash flows due to decline in forecast of coal prices. Therefore, the Management has reversed

impairment loss of ₹2,320 crore (net of depreciation of ₹330 crore) and disclosed under exceptional items during the quarter and nine months ended 31st December, 2015. However, for the same very reason that long term coal prices are predicted to be low, we had to impair the coal investments, therefore we need to make sure that we reflect our accounts appropriately.

The matter related to Compensatory Tariff was reverted to APTEL by the APEX court. Now that APTEL has referred it to CERC, we are hopeful that CERC will compensate us for the force majeure and will give an order that will remove our difficulty and hardship.

► **What's the secret of your success in the power distribution segment? Are you pursuing more such business opportunities in different geographies across the country?**

Our experience and expertise gained over the years is the secret to our success in the power distribution segment. A clear understanding on the magnitude of technical and commercial losses is the first step in the direction of reducing T&D losses. This can be achieved by putting in place a system for accurate energy accounting. We have invested in modern metering & distribution automation technology (basic parts of smart-grid), which enables monitoring and diagnostics to help maximize asset performance and reduce unexpected equipment failures and subsequent power outages through alerts, detection, diagnosis, and prognosis. As a responsible utility we monitor performance and identify outages, restore power, and precisely dispatch crews. The result is less "downtime" and more satisfied consumers. Smart grid automation technologies, such as distribution management systems and outage management systems, can work in conjunction with smart meters and advanced metering infrastructure to provide real-time knowledge of the grid's status, enabling us to prevent trouble before it occurs. These details contribute to our success too.

Tata Power is always on the lookout for opportunities that add value to our stakeholders. We intend to increase our distribution footprint from Mumbai, Delhi and Jamshedpur to international locations like Nigeria, Kenya and the Middle East. We aim to reduce AT & C losses to 13% over the next five years and also intend to act as Technical Service Provider in Nigeria and have partnered with Vigeo Power Limited, GUMCO and Africa Finance Corporation for this purpose. We've signed aMoU in Kenya for providing transmission and distribution solutions whereas we're evaluating business prospects for a comprehensive electricity management solution including distribution in the Middle East.

► **What's the way forward to revive the debt ridden discoms all over the country? Would you like to comment on the likely success of the Uday (Ujwal Discom Assurance Yojana) scheme for Discom?**

We believe PPP model is the best model for bringing in distribution reforms in the country. PPP Model in the distribution of electricity encompasses all functions and obligations relating to distribution of electricity in a license area. The concessionaire, selected through competitive bidding, would be responsible for

maintenance, operation and upgradation of the distribution network and the supply of electricity to the regulated consumers. Reduction of AT&C losses, improvement in quality of power supplied, strengthening of distribution network, improved customer satisfaction and introduction of competition through open access are some of the salient feature of this model.

A successful execution of Public Private Partnership can be seen through the functioning of the Tata Power Delhi Distribution Limited (TPDDL). The organization is a joint venture between the Tata Power Company and the Government of Delhi and has brought tremendous value by bringing down AT&C losses to 13% from 52% in record time.

So far we have seen that even though the franchisee models in the power business are flourishing and helping the discoms/SEBs as well as the consumer in many fronts (i.e. modern infra, better services etc), it is proving to be a costly affair for the private franchisee companies who require a huge amount of CAPEX (Capital Expenditure) at the start of their term and have to face a lot of problems to keep up the agreement norms and consumer expectations and acceptance as well as to improve the distribution infrastructure initially.

The Tata Power Company has recently executed a distribution franchisee agreement with Jharkhand State Electricity Board (JSEB) for the distribution franchise of Jamshedpur circle. The power sector has undergone a lot of reforms under the new government and this year has been very eventful. We are happy that the government, in tune with the criticality of this sector is addressing areas that need attention. Innovative schemes like dollar denominated tariff, fund raising through Green Bonds, revision of Standard Bidding document, UDAY scheme for distribution are some of the enabling policies that have ushered the investment confidence of the sector.

► **What are your current project pipeline and the targeted capacity by 2020?**

Tata Power is exploring increasingly weightier ambitions to keep fuelling its multi-fold growth across the Power value chain. The Company aims to be a 25,000 MW company by 2017, and has various projects in pipeline. It also has a strong renewable portfolio comprising of 25% generation from clean energy sources. In distribution, we are making steady progress in Mumbai where we have crossed the 6.5 lakh consumer mark and are now a significant player. Our distribution presence in New Delhi, through our subsidiary NDPL is doing very well.

Tata Power is working towards setting up power plants outside India. Geothermal energy has also been a key focus area for the company outside India. Tata Power is pursuing this through an investment of \$50 million for a 10% stake in an Australian company Geodynamics. Recently, Tata Power along with Australian company Origin Energy won the bid for a 240 MW geothermal project in Indonesia. The Company through its set up in South Africa is also working towards setting up additional power projects in Africa and Indonesia in the near future.

