Q&A

CMA Anil Sardana
CEO & MD Tata Power

***Q** Tata Power is India's one of the largest integrated power companies and you are the CMD of this prestigious company. Please share with us the experience of your journey.*

For over a hundred years, Tata Power has been a part of India's growth story. This journey began in 1915, when the company commissioned its first hydro-electric power stations at Khopoli. Tata Power has been lighting up lives of people in India since the last century. What started with 12 MW today has grown into 8669 MW. It has been an incredible journey so far and our 100th anniversary this year is a reflection of all the Company core beliefs, from our commitment to sustainable development to our promise to develop the communities living around our areas of operations. The company wishes to continue on its path of giving the nation something more than just power, thereby, bringing smiles to a billion faces.

I have been the CEO & Managing Director of Tata Power since 1st February 2011. Earlier too I worked till August 2007 including being the founder CEO & MD of Tata Power Delhi Distribution Limited worked in Tata Power for more than five years.

During my tenure, Tata Power Delhi Distribution achieved benchmark performance standards—including setting a world record in 'Reduction of Aggregate Technical and Commercial Losses'. Tata Power Delhi Distribution was also bestowed the prestigious 'Silver National Award for Meritorious Performance' for two consecutive years— 2004-2005 and 2005-2006—in Power Distribution by the Prime Minister.

***Q** What is your outlook regarding the performance of this sector in India? What are the opportunities and challenges do you face in the power sector?*

While the power sector in India has witnessed a few success stories in the last 4-5 years, the road that lies ahead of us is dotted with innumerable challenges that result from the gaps that exist between what's planned versus what has been achieved. The challenge as one sees in the recent times, especially compared to previous years, is deteriorating financial outlook of Discoms where the losses have been mounting to levels far higher than previous years. This 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 and unviable circle of uncertainty. Power distribution still remains 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 24X7' is required.

For a nation with a population of 1.24 billion the demand for power supply is expected to surge to 335 GW by 2017. However, this appears to be a far cry for being met, due to the demand-supply gap in terms of fuel sources and thereby the power generation. As of

February, 2014 India grappled with a peak power shortage of 5,378 MW. Eyeing a target of power supply of 335 GW, India will require a generation capacity of approximately 440 GW. This implies that we need to have an annual addition of 20 to 40 GW. This is a challenge to sustain. Despite huge coal reserves in India, the domestic power sector is facing 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.

Poor per capita consumption of about 900 Kwh/person/year, is meagre compared to global average of 2800 kwh/person/year. This shows that quality of life cannot teach global standards unless competitive, reliable and uninterrupted supply is facilitated. Slow pace of distribution reforms is another key concern. Power distribution still remains a segment that needs immediate policy reforms and a combination of tariff increases to reflect the increasing cost of fuels & depreciating rupee, competition &

open access and enforcement of the 'obligation to service' going forward. 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 is almost becoming a question mark for generation capacity addition in India.

Q What are the key areas that you would like to see in the forthcoming years to maintain a sustainable growth of your organisation in this industry?

Tata Power has ambitious plans to keep fueling its multi-fold growth across the power value chain. The Company has a target of generating 18,000MW by 2022, coupled with 4000 MW of Distribution cum Decentralized Distributed generation, and intends to have a 20 – 25 per cent contribution from 'clean power sources'. Towards this end, the Company has various projects in the pipeline and is scouting both organic and inorganic route of growth. We foresee an exponential increase of renewables in the energy mix over the next few years, in line with which Tata Power is evaluating various opportunities to grow in the renewable energy space. Tata Power is one of the major investors in the space of power generation using renewable energy sources.

The Company has a generation capacity of 1383 MW from clean sources such as hydro, wind, solar, geothermal and waste gas. In the current year, Tata Power has set a target of commissioning at least 150 MW of wind farms and 50 MW of solar projects. The Company has identified states including Tamil Nadu, Karnataka, Maharashtra, Gujarat, Rajasthan, Andhra Pradesh and Madhya Pradesh with wind power generation capacity. Furthermore, Andhra Pradesh and Madhya Pradesh have already seen a lot of addition of wind generation capacity and they have also met the mandated Renewable Energy Purchase Obligation compliance.

Q Please brief us about your current and upcoming projects.

While Indian market continues to remain the primary focus of business for Tata Power, it also dawned on us that due to fuel shortages, landavailability cycle as per new Act and delays in various clearances, the pace of opportunities in India may move to fruition slowly. Tata Power, thus, has started making investments into projects in select international geographies to strengthen and diversify its portfolio and for greater impetus for growth, and is setting up 2,600MW of capacity abroad. Tata Power commissioned its 126 MW Dagachhu Hydro Power Corporation in FY15 in Bhutan. Additionally, the company has achieved financial closure of its 187 MW Adjaristsqali hydro project in Georgia. Two projects under the company's JV in South Africa, 134.4 MW Amakhala Emoyeni Wind Farm and 95.17 MW Tsitsikamma Community Wind Farm, are under construction. The Company is also implementing 120 MW Itezhi Tezhi Hydro Project in Zambia.

Tata Power is also developing over 200 MW of wind power projects in India. Two wind projects of 154 MW are under construction in Gujarat and Rajasthan, of which 18 MW is already commissioned. The Company has further acquired land in Gujarat and Rajasthan for developing other renewable projects. A thermal Waste Heat Recovery project at Kalinganar, of 202.5 MW is in advanced stages of execution.

Q What are your acquisition plans in near future?

Tata Power is looking to acquire debt-laden, distressed assets to bolster capacity and earnings. We are exploring multiple options, both green-field and through possible acquisitions. This will help enhance the market share for both solar and wind based generation. We are evaluating and will continue to evaluate opportunities to acquire projects in various stages of development across the country. The company sees opportunities in the power sector, particularly renewable energy and distribution and in turning around stressed assets.

To help achieve the target of 18,000 MW by 2022, the Company has prioritised four key regions for international play. These include African Region, South East Asian Region; Middle East Region & SAARC Region. Tata Power has deployed resources in these regional geographies to understand the market dynamics and scout for opportunities. The shortlisting of these regions has been done based on aspects like opportu-

nities, risks, likely rewards, law and order situation & ethics cum values prevalent in these geographies. SAARC grid formulation is a step in the right direction, as it will bring robustness into grid operations and hence optimize capacity utilization of connected assets, as also optimize costs of electricity for neighboring countries.

Q What is the propose strategy for the Global Hub?

Tata Power has ambitious plans to keep fuelling its multi-fold growth across the Power value chain. The Company aims to generate 18,000MW by 2022, coupled with 4000 MW of Distribution cum Decentralized Distributed generation, and intends to have a 20 - 25% contribution from 'clean power sources', which will include a mix of Hydro, Solar, Wind, Geothermal and Waste Gas generation. Towards this end, it has various projects in the pipeline. While Indian market continues to remain the primary focus of business for Tata Power, it also dawned on us that due to fuel shortages, land-availability cycle as per new Act & delays in various clearances, the pace of opportunities in India may move to fruition slowly. The Company, thus, has started making investments into projects in select international geographies to strengthen and diversify its portfolio and for greater impetus for growth, and is setting up 2,600MW of capacity abroad. In line with the international strategy, the Company continues to evaluate investment opportunities in Africa, Turkey, Middle East, South East Asia and the SAARC region.

Q Please aware us about initiatives taken by your organisation to maintain sustainable Green Power generation.

Tata Power has consistently been working towards having a 20-25 percent contribution of clean and green energy to its overall generation portfolio. Today, Tata Power's clean and green energy stands at 1383 MW. Tata Power's clean and green energy portfolio comprises of 576 MW of hydro, 56 MW of solar, 511 MW of wind and 240 MW of waste gas based generation.

We have strived to be a responsible power company by expanding our clean and green portfolio, and have implemented eco-friendly technology to generate sustainable power. By introducing innovative initiatives and responsible business practices we aim to have minimal impact on the environment and continuously reduce our carbon footprint to deliver sustainable energy. The company has endeavored to lead the reform process for sustainable power and is committed to safeguarding the environment for future generations. We are constantly scouting for newer clean and green energy projects which are in line with our core business value of sustainable growth, and will further enhance and increase our clean energy footprint.

Hydro energy projects

The company has an installed hydro capacity of 576MW, and has plants spread across Maharashtra, including Bhira, Khopoli and Bhivpuri. The company has also recently commissioned its Dagachhu project in Bhutan. Tata Power and Clean Energy Invest AS Norway (Clean Energy) and IFC InfraVentures (IFC) completed the financial closure of the 187MW Adjaristsqali hydro project in Georgia. The project, being financed by IFC, ABD and EBRD, is the largest-ever private hydropower investment in Georgia amounting to $400 million through project financing. Furthermore, the company has further plans to increase its hydro energy generation through various projects which includes its partnership with Norway-based SN Power to develop hydro power projects in India and Nepal. The consortium has also bagged the 240MW Dugar hydro electric project in Chenab Valley in Himachal Pradesh, India.

Wind energy projects

Tata Power has an installed capacity of 511MW in wind energy, and has plants spread across five states-Maharashtra, Gujarat, Tamil Nadu, Karnataka and Rajasthan, which are the leading states in promoting wind power generation in India. The company, has recently commissioned its 24MW wind farm at Rojmal in Gujarat through its subsidiary, Tata Power.

Renewable Energy Limited (TPREL)

The company has further plans to increase wind energy generation in South Africa through Cennergi Pvt, a joint venture (JV) between Tata Power and Exxaro Resources, a South Africa-based diversified resources company. Based in South Africa, Cennergi is focused in investigation of electricity generation projects in South Africa, Botswana and Namibia. The initial project pipeline focuses on renewable energy

projects in South Africa, and Cennergi's strategy is to create a balanced portfolio of generation assets. Department of Energy, Government of South Africa, announced Cennergi (the Company's South African joint venture with Exxaro) as the preferred bidder for two wind projects of 234 MW - Amakhala 139 MW and Tsitsikamma 95 MW projects.

Solar energy projects

Tata Power has a strong portfolio of 56MW of solar generation capacity.

The company has commissioned its solar power project of 29MW solar power project in Pallaswadi, Maharashtra in May 2014 and a 25MW in Mithapur, Gujarat in January 2012. It has also executed a 3MW solar photo-voltaic plant at Mulshi, one of the largest grid-connected solar projects in the state of Maharashtra. The company had set up its first solar power plant of 110kW in 1996 at Walwhan in Lonavla. A 60.48kW solar power plant has been installed on the rooftop of one of the company's offices in Mumbai. The power generated by these solar panels is expected to take the lighting load of the entire building.

Waste gas generation

Tata Power has an installed waste-gas generation capacity of 240MW through its plants at Haldia and in Jamshedpur. The plant is based on the blast furnace and coke oven gases, waste gases from steel making process which help in reducing greenhouse gas emission significantly.

The company is also looking at other similar projects with Tata Steel.

"CMAs can study the pattern for cost of generation, identifying inefficiencies in cost management, eliminate inefficacies will help reduce the costs significantly"

Geothermal Power

A consortium led by Tata Power along with Origin Energy Ltd., Australia, and PT Supraco, Indonesia, won the Sorik Marapi geothermal project in Northern Sumatra, Indonesia. The Sorik Marapi project is estimated to support the development of approximately 240MW of geothermal generation capacity and is currently under development.

Q Affordability and its impact on energy prices are the areas of concern for the future growth of renewable energy, what strategies do you like to implement for optimisation and cost reduction?

The renewable energy prices have declined over the years. These are expected to become more competitive on standalone basis. Besides Renewables, conventional format of energy will be competitive provided global energy prices remain at lower cost-cycle as is the case at present.

Large format plants like Ultra Mega Solar Power projects can also help bring economies of scale and bring down the cost significantly. We need to promote more indigenous manufacturing of components that will help us reduce costs and economies of scale.

Q The solar energy is a challenge because production of the raw material is extremely volatile and keeps varying sharply across the world. How do you deal with this uncertainty?

The solar industry is in a much better situation now compared to the situation it was in last 5 years. The panels that form 60-70 per cent of the cost of the projects were extremely expensive and so a lot of projects were using imported panels. Surprisingly these panels were cheaper than the indigenously manufactured panels. With the imposition of antidumping duty and the exemption of various solar energy equipments from Central Excise and Customs Duty has led to more stable prices in the Indian market.

We being an integrated company promote the use of indigenous manufacturing of the panels. Tata Power Solar is one of the largest manufacturers of solar panels and caters to many projects in India. The company currently manufactures and operates 200 MW and 180 MW of module & cell manufacturing facility in Bangalore, which is providing high quality solar components to power plants. We are a Tier-1 bankable module manufacturer, known for our high quality, efficient and reliable modules worldwide.

Q What initiatives/investments have been planned to improve your transmission and distribution

operations?

Tata Power has been a pioneer in innovation in the power sector value chain and aims at advancements in technology to provide reliable and quality power to its consumers. The company has been constantly investing and upgrading their infrastructure to make the distribution system more robust, and thus has reached out to more than 2 million customers both in Delhi and Mumbai distribution. We intend to move to smarter technologies for both Delhi and Mumbai. The company has recently launched a self-healing grid (SHG) which is a totally decentralised approach, where, in case of power fault, every substation communicates with each other and executes the best possible instruction for rapid fault isolation and restoration of supply in the network. The power restoration turnaround time is less-than-a-minute and is extremely useful in case of essential services like hospitals, banks and data centres, and the technology also reduces emissions and carbon foot-print.

To better serve our consumers, we have successfully reached 1,550 km low tension and 2,150 km of high tension network in Mumbai till date. The company is currently the only utility in Mumbai to have already piloted electricity distribution with space saving and safe technological measures such as pole mounted transformers, natural ester-filled transformers, underground feeder pillars, e-house DSS and using indigenously designed outdoor meter panel box for societies where alternative meter rooms are not available. The company has also applied an extremely critical tool in Demand Side Management and Demand Response program. The program awards consumers a financial incentive in curtailing power loads by reducing electricity usage compared to their regular consumption levels. DR is considered to be a smart grid solution where the utility works along with the consumer in voluntary load management. We see huge potential in large scale implementation of Demand response programs in India and several successful pilots done by us have emphasized this point Tata Power Delhi Distribution recently announced deploying first of its kind Smart Grid, wherein we will use Honeywell technology and services to link more than 160 buildings in its distribution network and call for temporary reductions in energy use, when demand threatens to outpace supply in grid stress conditions. This includes power management during periods of peak consumption, as well as other grid emergency situation.

This helps alleviate stress on transmission and distribution lines, and improve supply efficiency.

The company aims to continue to implement aspects of smart grid both in Delhi and Mumbai to steer India towards more dynamic and efficient electrical grid.

***Q** As we know TATA is always concerned with the issue of Corporate Social Responsibility. How critical is this to maintain, and would you highlight some of the initiatives in this regard?*

The multitude of community initiatives by the Company has sowed and fostered from its earliest days, flowing from wellspring of voluntary commitment as opposed to obligatory commitment. Tata Power's community initiatives span the fields of community empowerment, income generation opportunities, ecology conservation, Self Help Group formation, drinking water and sanitation facilities, school-level interventions, and extending help to the farmers, fishermen, and other community stakeholders. Tata Power continuously undertakes a committed approach with the local community and continues to work with them on various platforms and multiple community development initiatives. The Company is also conscious of the natural resources in the vicinity of the plant and has taken appropriate steps to not just preserve them, but to also improve the flora and fauna in and around the project area.

We have a lot of initiatives for income generation among youth and women, healthcare initiatives like vaccination, heath check-up camps, installation of RO plants, promote cultural programmes among the community. For education, we have project 'Shiksha Sarathi' that aims to improve the learning environment for children through better educational facilities for children living in and around its operations.

Further, the company plans to train 2 lakh skilled workers over the next decade trough the Skill Development Institute. As a part of our 'Invisible Goodness' initiative for the centenary year, the company has launched new initiatives- Tata Power Skill Development Institute, 'Be Green' and 'Act for Mahseer'.

• Under the 'Be Green' initiative, the company aims

to motivate consumers to opt for e-bills to donate the collected savings for a noble cause. The company has successfully reached the figure of Rs. 4.5 Lakhs and wish to achieve at least Rs. 12 Lakhs or more based on consumer responses towards this cause.

• As a part of our 'Invisible Goodness' theme, the company has also launched 'Act for Mahseer' – largest and the most comprehensive campaign on Mahseer conservation, reaffirming the company's commitment to the cause of saving the endangered species.

Q Cost Management always plays a pivotal role to gain competitiveness in this sector. Please suggest in what ways Cost and Management Accountants may offer their expertise more effectively in this quest.

The Cost and Management Accountants can study the pattern for cost of generation. The tariff is determined using levelised cost of generation that includes fixed and variable costs. Fixed costs include salaries, depreciation, overheads etc. and variable costs include fuel costs. The Cost and Management Accountants can deeply study the nature of costs and help in identifying the inefficiencies in cost management. Elimination of these inefficacies will help reduce the costs significantly.

Going forward, the Cost Accountants could help change the paradigms of the way projects are bid & built. Herein expert agencies of critical plant, equipment & systems can be called to bid on providing output from their system on per unit basis & ten aggregated to lower cost delivery of power to consumers. By this all systems will be similarly efficient eg: boiler, turbine, fuel handling, waste handling, switching & transmission etc

Q What policy framework and initiatives would you expect from the Government to boost up this industry?

The power sector is undergoing a lot of reforms under the new government. This year is expected to be eventful as well. We are happy that the government has realised the criticality of this sector and is restructuring areas that needed attention. However, there are some more areas that we would like to draw attention of the government. In terms of generation, simplifying the process of setting up of projects is important that leads to a long gestation period and hampers the capacity building in the country. The recently announced 5 UMPPs under the 'Plug and Play' model is expected to provide respite to the issue. However, we need to wait and watch how that works. Policies pertaining to imported fuel based mega projects need to be suitably modified. The coal sector also needs to be opened up to private and foreign investments to bring in international player's technical and financial capability in exploration. The transmission sector should evolve through PPP model that has been successful. The need for open access has become the need of the hour.

This will promote more competition in the industry. The Amendments to the Electricity Act will bring in must desired change and believe that it will help the developers to be more focused and committed towards the sector.

Q Would you like to give any message to those aspirants who want to be a part of your organisation?

We would encourage and impress on young aspirants that:

- Be Ethical & value-based
- Hard work is necessary for achieving biggest dreams
- Be passionate about your work or field, love what you do
- Be focused in what you do and prioritize well
- Be proactive and focus on performance and good execution
- Be patient and a team player