

WHAT AILS THE INDIAN POWER SECTOR?

As an established private sector player in power generation, with a generating capacity in excess of 9,000 MW through a mix of thermal, hydro and renewable energy, can you elaborate on what ails the Indian power generation industry?

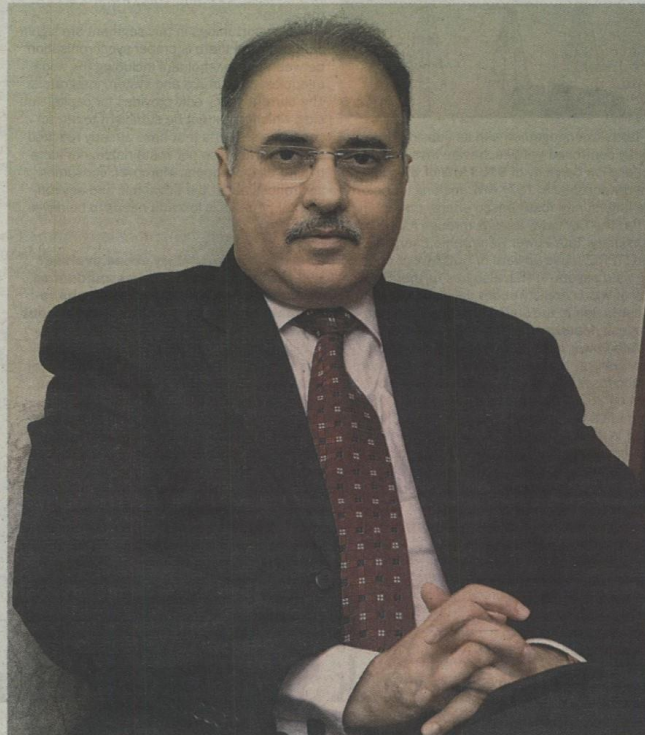
As per the statistics available from various government authorities, the power needs in the country are adequately met. However, the country's per capita consumption still hovers around 1000kwh/per person/per year which is 1/3rd of global average.

As of FY 2015-16, India declared a peak power shortage of only 4,208 MW. Eyeing a target of power supply of 335 GW, India will require a generation capacity of approximately 440 GW. This indicates that we need to have an annual addition of 20 to 40 GW. This is a challenge to sustain.

One of the major problems addressed during the year was domestic coal shortages. However there are several generating stations that have to either import or buy under e-auction to meet their requirements as they are not being allocated coal. This resulted in increasing non-utilisation of assets that are already built and would distract new capacity additions.

Slow pace of distribution reforms is a key concern faced by the sector. 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. Also, creation of Regulatory Assets in the books of a distribution company is another serious development and has dried up ability of discoms to source incremental bulk power. The Central Government has however invested tremendous efforts through Uday scheme basis which it is hoped that State Electricity Boards should be able to tide over the crisis of Discom in next few years. Another 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 state's engagement, developers would find it difficult to bring to fruition, their investments on ground.

Besides distribution reforms, shortage of natural gas in India is another major challenge in the sector. 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. 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.

Power transmission is an area, where Tata Power is reporting a low T&D loss, as against the public sector and state power utilities, which report higher losses. Do you have plans to enlarge the transmission basket and if so, can you elaborate on the company's plans?

It is vital for power sector entities to monitor and review their T&D network efficiency in order to curtail losses. Electricity generated at power stations pass through a large and complex network of instruments like transformers, overhead lines, cables & other equipments before reaching end users. During this process

some percentage of the units generated is lost in the Distribution network. This difference in the generated & distributed units accounts for Transmission and Distribution loss. T&D Losses can be classified as Technical losses and Non-Technical or Commercial losses.

Our experience and expertise gained over the years demonstrates that it is possible to reduce these losses in a reasonably short period of time. This is possible if there is a clear understanding on the magnitude of technical and commercial losses which 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. Indian utilities needs to urgently invest 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

ANIL SARDANA, CEO & MD, Tata Power is considered amongst the most respected voices of the power sector. In fact his well analysed and far thinking views are most sought after, both by the government as also by the leading players of the sector. Often a voice for industry, his intricate understanding of India's power sector makes him an authority in matters of India's power needs. In conversation with ADC's Dominic Rebello, he talks about the present woes ailing the sector, but is happy that the government has understood the criticality of this sector and is addressing issues which 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.

subsequent power outages through alerts, detection, diagnosis, and prognosis. Utilities should be able to 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 utilities to prevent trouble before it occurs. We could then help to reduce AT & C losses to lower numbers over the next five or appropriate years and also intend to act as Technical Service Provider in International geographies and have partnered with Vigeo Power Limited, GUMCO and Africa FI-

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nance Corporation for this purpose.

We are always keen to enhance our transmission & distribution portfolio. In Mumbai, Tata Power has crossed the 6.0 lakh consumer mark and plans to invest Rs 1000 crore for developing our own network. Similarly, we have invested nearly Rs 4000 crore in network enhancement during the past 10 years in Delhi. Tata Power intends to increase its distribution footprint from Mumbai, Delhi to available opportunities as and when they get announced.

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 Discoms?

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. The functioning of the Tata Power Delhi Distribution Limited (TPDDL) is the perfect example of a successful execution of Public Private Partnership. TPDDL 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 1.3% 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 distribu-

tion 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 has understood the criticality of this sector and is addressing issues which 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.

On the renewable energy front, can you elaborate on the future plans of Tata Power, where the company has indicated that it may look at both organic and inorganic routes for expanding capacity?



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 non-fossil based energy players in India. The Company itself & through its 100% subsidiary, Tata Power Renewable Energy Limited (TPREL), has upward of 500 MW of operating wind assets. TPREL also has further 500 MW of wind capacity under development and construction in the states of Gujarat, Andhra Pradesh, Madhya Pradesh and Karnataka.

Tata Power reiterating its commitment to clean energy has recently increased the share of non-fossil fuel energy output to 30-40 per cent by 2025. This move is in line with the government's commitment made in Paris. 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 both Solar, Wind, and hydro 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.

What will help improve the viability of solar and wind power- Government policy, private sector investment, market shift to grid parity?

The Government has set the target to increase the renewable energy capacity to 175 GW by 2022. However this needs to be targeted with proper planning and approach. In order to achieve this target, we need a paradigm change in the policy framework around the entire renewable energy ecosystem in order to establish the right business environment. A state policy and the supporting regulatory framework complement each other in pursuing the promotional agenda, particularly when a capital-intensive new technology needs to be supported. A conducive environment to enable rapid capacity addition in an economically viable manner for all stakeholders, will spell positive growth for the sector.

The opportunities in this segment are significant provided there is proper synchronisation between all stakeholders including the nodal agencies, consumers and system integrators. The current policy only provides for capital subsidy, which might not be sufficient to attract consumers. Tariffs that have already reached grid parity are also not sustainable, nor lucrative for all developers. Moreover, consumer awareness about the economic and environmental benefits is low and needs to be developed.

How has the regulatory scene evolved? Will the proposed measures announced strengthen India's case of taking its renewable energy on par with conventional power?

With various modified and progressive policies brought in by the government, it is evident that the government is trying to improve the policy scenario of the power sector. Government's new policies set the promotion of renewable generation sources to create more competition and efficiency in operations looking at improvement in quality of power supply in India. It also aims to incentivize the discoms to procure power from renewable sources so that the generators can viably generate and operate their plants. These will bring in a new roadmap to help increase the renewable energy in our energy mix and commitment towards producing clean and green energy.