

Will Mumbai maintain its supremacy in power distribution?

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Today, electricity distribution companies (Discoms) across the country have adopted different models to promote privatisation. Mumbai, however, has leapfrogged the rest of the country in consumer-centricity, offering its consumers the right to choose by allowing multiple power distribution licensees to operate.

Introduction of competition in distribution has improved the performance of the power sector through enhanced efficiencies, reduction of losses, better customer service, and improved management. It has also brought transparency, technology development, digitalisation, and knowledge gain for all stakeholders, and an enhanced system to ensure the redressal of grievances and the flow of information.

Mumbai is growing at a significant rate of around 4% and its energy requirements are on the rise. The city's growing power demand is being driven by the development of large-scale projects such as multiplexes, malls, metros and infrastructure projects, along with the steady increase in population. Hence, power companies in Mumbai carry the responsibility of providing uninterrupted power to cater to the city that never sleeps.

This scenario is a challenge as well as an opportunity for power producers to find ways to augment existing uninterrupted energy supply in Mumbai as well as for distribution licensees to deliver efficient services to all consumers.

The Islanding System, designed by Tata Power in 1981, is one of the classic innovations in this space. It has ensured continuity of power supply to all essential services in the event of a breakdown in the Western Regional Power Grid, and assured an uninterrupted and reliable supply of power to the city of Mumbai for almost 3-4 decades.

Since the technique was first implemented, there have been 37 major grid disturbances in Mumbai, and the city has

survived 27 of those successfully. The system has achieved 100 percent success rate since 1997, having operated successfully on all 16 occasions. The scheme has been provided on all tie-points to simultaneously island and operate the Mumbai system in isolation.

The 'Islanding Scheme' in Mumbai has been a landmark achievement for India's power sector, and assumes even greater relevance now, in view of newly proposed schemes like Smart Cities.

Power companies in Mumbai have made considerable efforts to advance technology, streamline the distribution process, and to ensure 24X7 power supply to their consumers. The installation of a Distribution Automation System (DAS) to help identify faults and restore power supply from remote locations, and the installation of power quality meters and surveillance cameras at all distribution substations to monitor the quality of power supply are two such examples.

A Geographical Information System (GIS) keeps the network data uploaded, which helps the Company keep track of new consumers, and supply them with power in a timely manner. The expansion of the network across the city is underway, to bring direct services to various customers. There is also strong focus on bringing renewables-based power.

The use of smart meters, AMR, ester-filled transformers, substations at higher floors, online processing of applications, separate technical and commercial call centres, online information system for new connections, comprehensive customer app, electrician certifications, EHSM system for safety, package substations, comprehensive payment facilities, accredited meter testing labs, and transformers at higher floors for high-rise buildings are some of the other notable achievements. Adoption of such customer-centric technologies and innovations have kept Mumbai ahead of the curve.

It is often questioned whether Mumbai will continue to maintain its supremacy in distribution reforms, from a technical and commercial standpoint, or whether there are telltale signs of falling behind. The truth is, while Mumbai has been up to the challenges of providing choice and service to customers, questions remain over certain other areas.

There is the challenge of maintaining costs of a network borne out of requirement of the Act. Can the utilities of Mumbai come together to overcome this challenge by creating a pool of network in the interest of customers? Can Mumbai utilities leapfrog to supply-and-network-separation - something that is very possible under the present Act? Can utilities create economic space to renew an ageing network? Opportunity stares us in the face, but it has to be understood and taken up by utilities, consumer bodies, and regulators. If this could be done with transmission, to optimise costs and provide better service, why not with distribution? The network costs need attention of the MCGM for making electricity affordable and spurring growth.

Industry has been shifting out of Mumbai for many reasons, but deterrent tariff has had a part to play in it. Although the industry is adopting other options for procuring power, it is at the risk of unreliability and associated losses. Can the tariff structures be reformed in such a manner as to bring tariffs close to the cost of supply? Contrary to belief, the reform will bring growth to Discoms, lowering tariffs across the board. The development of a working-model algorithm can easily prove this.

Another question that often comes to mind is whether Mumbai can be the most economic in procurement of power. The city has large variations in peak and base power, thus creating a built-in cost inefficiency in power procurement. Again, can utilities come together and plan a mix of peak and non-peak power to overcome cost inefficiencies? Development of mix generation can be facilitated by providing reasonable quantum to the developer, which can be better served by cooperation of these utilities.

The city must also be aware of the deteriorating quality of power, and not catch its customers by surprise. Voltage dips, fault currents, voltage levels - all need attention. In an integrated grid, this can be achieved only by addressing the problem on a total network basis and not by tweaking an island of networks. A combination of embedded and long-distance generation has to be judiciously worked towards, to ensure reliability and quality of power.

Mumbai is at a crossroads of threats to its cost and its service leadership, and it is time for utilities, consumer bodies, and regulators to come together and find solutions that will set an example in customer-centricity for the rest of country to replicate. A good model will be one that enables improvement of efficiencies, reforms in tariffs, reduction of losses, and an improvement in reliability. And utilities will have to take the lead as they have a responsibility towards the citizens of

Mumbai. It is time for all stakeholders to come together and plan with a long-term focus towards Mumbai's development and provide a platform to the rest of country an example of excellence in customer centricity.

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