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We Are Committed To Innovation In Smart Metering: Tata Power-DDL

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Tata Power Delhi Distribution Ltd (Tata Power-DDL), catering to a populace of over 7 million in North Delhi, is a stellar example of how public-private partnership can radically transform the power distribution sector. In this exclusive interaction, we ***have Kiran Gupta, Chief – Customer Experience, Commercial, & Government Affairs, Tata Power-DDL,*** *discussing the utility's smart metering-related achievements and goals. She asserts that Tata Power-DDL has always been at the forefront of smart metering technology, and the utility is committed to constantly pushing the boundaries of smart metering technology to empower its customers. On prepaid metering, Kiran Gupta exudes confidence that this culture could financially turn around state discoms. An interview by Venugopal Pillai.*


Kiran Gupta

Tata Power DDL, as we appreciate, has been a forerunner in the smart metering space. What is the current population of smart meters in TP-DDL's command area, and what is the broad breakup between C&I and residential consumers?

Tata Power-DDL is at the forefront of the power sector in implementing smart metering technology. As of now, we have installed 4 lakh+ smart meters across categories, in line with the plan approved by the Hon'ble Delhi Electricity Regulatory Commission.

With residential customers as our major customer base, maximum smart meters have been installed for them. We have installed approximately 1,59,000 smart meters for commercial and industrial (C&I) customers, around 2,37,000 for residential customers, and about 14,600 for other categories.

We continue to empower the power sector through our smart metering program with the goal of covering our entire customer base, further reinforcing our leadership in the smart grid revolution and our commitment to delivering superior service to all our customers.

What is the position with respect to prepaid smart meters, on the same lines?

At Tata Power-DDL, we are committed to providing our customers with the latest technologies to manage their electricity consumption and ensure uninterrupted supply. Currently, we have installed more than 4,500 smart prepaid meters across our service area.

Our prepaid smart metering initiative is part of our broader strategy to promote energy efficiency and customer empowerment through multiple benefits to the customers which include real-time energy management, savings on power bills, and recharge alerts. The prepaid metering system ensures advance billing and Customers can generate prepaid coupons at their comfort using "TPDDL Connect" App.

We recall that TPDDL had tied up with HPL Electric & Power to introduce NB-IoT technology in smart meters. What is the current status? Please also discuss the relevance and significance of NB-IoT technology.

With technological advancements and innovations, we are committed to leveraging cutting-edge technologies to enhance our services and thus NB-IoT was introduced in smart meters. Currently, around 1 lakh out of a total of 4 lakh+ smart meters are NB-IoT, with an additional 1 lakh NB-IoT smart meters being added to the network in the current fiscal year. Due to its exclusive bandwidth, NB-IoT offers dependable communication abilities and extensive coverage, even in challenging locations like basements at customer locations.

However, with the introduction of new communication spectrums and technological advancements, Tata Power-DDL has begun to leverage LTE-4G connectivity. Our priority is to provide customers with sturdy and reliable smart metering solutions.

Meanwhile, what is the progress on TPDDL's alliance with "Anyline" that was aimed at introducing forensic meter reading?

Our collaboration with 'Anyline' marked a significant step towards enhancing the accuracy of meter readings. The forensic meter reading model is the industry's first spoof-detection model mutually developed with Anyline.

This is one-of-its-kind prototype of the spoof model to detect fraudulent practices prevailing in the field. It is being currently implemented in Smart Meter Reading Device (SMRD). We have shared valuable feedback with Anyline to strengthen the model's spoof detection logic.

With domain knowledge inputs of Tata Power-DDL and technological expertise of Anyline, we are further working on improving through annotation of the spoof model.

> "With technological advancements and innovations, we are committed to leveraging cutting-edge technologies to enhance our services."

On a slightly different note, what specific safety training programs does Tata Power-DDL offer to new technical joiners?

All the new recruits at Tata Power-DDL are taken through a comprehensive training at our dedicated safety training centrefor Business Associates which is called as the Distribution Operations & Safety Excellence Centre (DOSEC). The electrical safety training program is diligently designed to enhance knowledge and skills necessary to identify, assess, and mitigate electrical risks.

The key training modules include regular competency enhancement for zonal employees, behavioural-based safety training, and specialized training such as crane and scaffold safety, safe driving, and other need-based trainings along with training for safety procedures and usage of various tools, PPEs and LOTO.

Additionally, Tata Power-DDL provides advanced Live Line training or Hands-on Technical Training (HOTT) at its RG-4 grid. The company utilizes its 24 strategically located practice yards to simulate real-world worksite conditions for practical training. Through these structured and comprehensive safety training programs, Tata Power-DDL ensures that all new technical joiners are well-prepared to maintain a safe and secure working environment, thereby upholding our commitment to safety excellence.

Speaking more of smart metering technology, has TPDDL progressed with its pilot project for time of day (ToD) metering? Do you feel that ToD mechanism can generally be a useful tool to flatten the peak load curve?

The smart metering technology, including time-of-day (ToD) metering, has been a focus for Tata Power-DDL. Currently, Tata Power-DDL has a customer base of 49,000 (around 16 per cent of which are C&I customers) that are on ToD metering. Billing is being done on the basis ToD consumption, as applicable. However, the customers being less in number and factories/establishments running in particular/three shifts, there has not been any noticeable impact on reduction of peak demand, as of now.

Do you feel that the prepaid metering culture can eventually make state government discoms financially viable? We presume that TPDDL has largely "paying- type" customers. In this context, what is the true relevance of prepaid metering for TPDDL?

Probably yes, we believe that the prepaid metering culture can significantly contribute to the financial viability of state government discoms. Prepaid metering offers numerous advantages, such as the advance availability of cash, ease of recharge, remote tariff updates, balance checking by consumers at any time, minimal billing complaints, and incentives for bulk recharge.

While we currently cater to a "paying-type" customer base, we believe that prepaid metering offers a valuable tool for the future and work towards a more efficient and financially secure power sector, enhancing both operational efficiency and customer satisfaction.

Please take us through the overall plans of TPDDL in the field of smart metering, over the next 2-3 years.

Tata Power-DDL aims to provide reliable, efficient, and customer-centric energy management system, setting new benchmarks in the energy sector. We are constantly pushing the boundaries of smart metering technology to empower our customers. In the coming 2-3 years, Tata Power-DDL will be leveraging the best communication technology available in the ecosystem and would accordingly increase deployment of smart meters. We will be exploring an array of use cases i.e. use of smart meter data in network planning (like analysis of voltage complaints, connect-disconnect without opening seals for meters).

We are committed to innovation in smart metering and are confident that these advancements will benefit both Tata Power-DDL and our valued customers.