



4th Annual Conference on

METERING IN INDIA

New Requirements, Smart Technologies and Best Practices

July 3-4, 2017, Le Meridien, New Delhi

Organisers:

POWERLINE

Smart Utilities

Co-sponsor so far:



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METERING IN INDIA

Mission

- Metering in the power sector has improved significantly over the years with several states achieving 100 per cent electrification of consumers.
- Various government initiatives including the Ujwal Discom Assurance Yojana (UDAY), the Integrated Power Development Scheme (IPDS), and the Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) have laid emphasis on metering, thereby creating significant market opportunities for metering manufacturers.
- One of the key commitments under UDAY is to install smart meters for all consumers with more than 200 kWh of monthly electricity consumption by 2019. It is estimated that about 35 million customers consume more than 200 kWh of electricity per month. Further, the IPDS and DDUGJY are targeting the installation of 6 million meters (including smart meters) and 12 million meters (only in rural areas and excluding smart meters) respectively at the consumer, feeder and DT levels.
- Driven by these government initiatives and modifications in utility operations and infrastructure, the metering requirements have also changed over the years. Most of the utilities have transitioned from basic electromechanical meters to electronic meters and are now moving towards smart meters with integrated communication systems. These meters help automate processes such as meter reading and also allow better load management.
- A number of utilities have already adopted automatic meter reading (AMR) for improved billing, information regarding energy consumption, tamper detection and load analysis. Going forward, advanced metering infrastructure (AMI) is expected to be the key focus. It is estimated that around 50 million consumers will be covered under smart metering or AMI by 2020.
- To facilitate the roll-out of smart meters in India, the CEA has formulated guidelines on the functional requirements of AMI. It defines the minimum functionalities that AMI systems should support. These include remote meter data reading, ToD metering, prepaid functionality, net metering, remote load limiting/connecting/disconnecting, and the ability to integrate with the existing system.
- With large-scale deployment of smart meters, there will be huge volumes of data available with the utilities. To this end, meter data management systems (MDMS) have an important role to play. MDMS not only helps in the acquisition and storage of data, but also enables validation and analysis, and thereby provides processed data to be used for various applications such as billing, network planning and load analysis.
- Other opportunities in the metering segment include net meters and prepaid meters. Net metering assumes a critical role in view of the projected growth of the rooftop solar market. Further, prepaid metering offers the potential to improve revenue collection and thereby reduce high AT&C losses, which is still one of the major challenges facing the Indian power sector.
- Interoperability, standardisation and quality of meters, as well as meter tampering are the key issues being faced by the segment. Efforts have increased to make energy meters more reliable. However, faulty performance of meters is quite common. Further, with improvements in technology, various high security seals and sensors are now available to prevent meter tampering and hooking. Some utilities are already using these new technologies, but wide-scale deployment is yet to pick up.
- The mission of this conference is to provide a platform for key stakeholders to discuss the requirements, challenges, and opportunities in metering in India. The conference will highlight the experience of utilities, new and emerging technologies, and various aspects of metering such as testing and design, data management, smart solutions, etc.

Previous Participants

The participating utilities in our previous conference on "Metering in India" included:



Other participants included ADCC Infocad, Brooking India Communication Test Design India, Cyient, ERDA, Essential Energy India, Fluentgrid, Genus Power Infrastructures, HoloFlex, Ieema (Indian Electrical & Electronics Manufacturers Association), Infosys, KG Technologies Inc., Landis+Gyr (Toshiba), Larsen & Toubro, Mahindra & Mahindra, Motilal Oswal Securities, Nortex Marketing, Reliance Infrastructure, Saft Batteries, Schneider Electric India, Secure Meters, Supermax Components, Syratron Technologies, etc.

AGENDA/STRUCTURE

TRENDS AND OUTLOOK

- ❖ What are the key trends in metering?
- ❖ What are the key challenges?
- ❖ What is the segment outlook?

UTILITIES' PERSPECTIVE

- ❖ What has been the utilities' experience in implementing new metering technologies?
- ❖ What are the new metering technologies being considered for deployment?
- ❖ What are the challenges faced in the deployment of smart metering solutions?

GOVERNMENT/CEA PERSPECTIVE

- ❖ What are the existing regulations related to the operation of meters?
- ❖ What are the functional requirements of AMI notified by the CEA and the technical specifications of smart meters?
- ❖ What are the future plans of the government for supporting this segment?

STATE REGULATORS' PERSPECTIVE

- ❖ What is the perspective of state regulators on the new metering technologies?
- ❖ How are the regulators supporting the adoption of smart metering by utilities?
- ❖ What are the key issues and challenges?

METER MANUFACTURERS' PERSPECTIVE

- ❖ What are the new technologies being offered by the industry?
- ❖ How is the industry catering to the specific requirements of utilities?
- ❖ What are the key issues and challenges faced by them?

SMART METERING

- ❖ What are the key functionalities being deployed by the utilities?
- ❖ What are the cost trends?
- ❖ What are the benefits envisaged?

AMR AND AMI

- ❖ What are the benefits of AMR and AMI solutions? What are the cost trends?
- ❖ What are the key technology options?
- ❖ How has the experience been so far? What are the utilities' plans going forward?

METER DATA MANAGEMENT SYSTEMS

- ❖ What are the key benefits of meter data acquisition/management systems for utilities?
- ❖ What are the technologies being used by utilities for meter data acquisition?
- ❖ How can utilities use data analytics for improved performance?

INTEROPERABILITY

- ❖ What are the benefits of interoperability to utilities?
- ❖ What are the standards and specifications to ensure the interoperability of meters?
- ❖ What are some of the other measures to ensure interoperability?

NET METERING

- ❖ What are the policy directives for net metering?
- ❖ What are the metering needs and requirements of rooftop solar projects?
- ❖ What are the technology solutions being deployed for bi-directional meters?

METER COMMUNICATIONS

- ❖ What are the communication needs and requirements for metering?
- ❖ What are the various technology options for utilities?
- ❖ What are some of the key concerns? How are these being addressed?

METER TESTING

- ❖ What are the key considerations and requirements for meter testing?
- ❖ What are the new meter testing requirements with changes in meter designs and standards?
- ❖ What is the meter testing capacity in India?
- ❖ How has been the experience so far?

METER DESIGN

- ❖ What are the key design considerations for meter manufacturers? What are the challenges faced?
- ❖ What are some of the new features included in meter designs?
- ❖ How are the evolving standards and specifications impacting meter design?

FOCUS ON METER TAMPERING

- ❖ What are some of initiatives being taken by utilities to prevent meter tampering and power theft?
- ❖ What are the new technologies available to prevent meter tampering?
- ❖ What have been the benefits of deploying these technologies?

BEST PRACTICES

- ❖ What are some of the best practices in metering?
- ❖ What has been the experience of utilities in using metering as a measure to reduce AT&C losses?

Target Audience

- The conference is targeted at
 - ❖ Power distribution companies (public and private)
 - ❖ Other utilities
 - ❖ Meter manufacturers
 - ❖ Technology providers
 - ❖ System integrators
 - ❖ Key consultants
 - ❖ Government/regulatory agencies
 - ❖ Other influencers, etc.

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