

17th Annual Conference on

IT & OT IN POWER

Digital Future: New Utility Requirements, Promising Technologies and Best Practices

September 6-7, 2018, The Grand, Vasant Kunj, New Delhi

Highlights of 2017

150 + PARTICIPANTS
50 + POWER UTILITIES

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NEW SESSIONS ADDED THIS YEAR

IT-OT FOR RENEWABLE INTEGRATION

ARTIFICIAL INTELLIGENCE

BLOCKCHAIN TECHNOLOGY

CYBERSECURITY REQUIREMENTS

Organisers:

POWERLINE

Smart Utilities

RenewableWatch

IT & OT IN POWER

Mission

- Significant changes are disrupting the traditional business models of power generation, supply and distribution, compelling utilities to adapt and innovate rapidly. These changes are being driven by factors such as ageing networks, newer forms of generation, greater environmental demands, multi-directional energy flow, new customer expectations, falling costs of renewable energy resources and proliferation of e-vehicles.
- The integration of IT and OT solutions across the value chain is thus becoming essential for utilities to remain relevant and economical. For generation facilities, IT-OT can help reduce unplanned downtime and optimise plant maintenance. For transcos, leveraging technology can enable real-time decision making, besides making the grid more intelligent and flexible. On the distribution side, utilities can simultaneously lower losses, increase revenues and improve customer interface through IT-OT solutions.
- While private utilities have been at the forefront of adopting new technologies, the state discoms receive significant support from the government through flagship schemes, such as the IPDS (including the erstwhile R-APDRP), the DDUGJY and the National Smart Grid Mission, to deploy new technologies. SCADA, DMS, AMI, OMS, ERP, feeder monitoring, GIS and a host of other new smart grid technologies are being introduced by utilities in pilots and towns covered under these programmes.
- At the heart of the technology transition in the distribution segment are AMI and smart metering solutions. In fact, the next few years are expected to see stronger commitments by state utilities for deploying smart meters as it has been made mandatory under the revised National Tariff Policy and UDAY. That said, challenges such as huge investment requirements and limited broadband connectivity could impact progress.
- Another key area of interest for utilities is deploying solutions that enable real-time, remote control or predictive maintenance to extend the life cycle or operating efficiency of assets. Utilities are also slowly warming up to the adoption of new and emerging technologies such as IoT, big data and cloud as digital transformation gains momentum.
- The transmission segment is also steadily making its way up the technology curve. The transmission grid is witnessing the adoption of state-of-the-art technologies such as wide area monitoring systems based on phasor measurement units at the central level. At the state level, transcos are adopting and investing in solutions for e-procurement, data centres, disaster recovery systems, as well as in improved communication and renewable forecasting technologies, to modernise their networks.
- However, as utilities move towards greater digitalisation of their critical infrastructure, they are adding more internet protocol gateways and other data delivery elements to their networks, thus increasing their susceptibility to attacks. Thus, it is important to design and build cybersecurity solutions.
- **The mission of this conference is to highlight the most promising IT and OT solutions, examine their potential and relevance in the Indian power sector, and discuss the key issues and challenges in their deployment and convergence. The conference will also showcase noteworthy applications, innovative projects and best practices across all segments - generation, transmission and distribution. It will provide an excellent forum for all stakeholders - power utilities, technology providers, system integrators and equipment manufacturers - to share their experience and exchange views.**

Target Audience

- The conference is targeted at:
 - IT officials/managers in generation, transmission and distribution
 - Top- and middle-level operations managers involved in OT
 - Managers of power plants (public/private/captive)
 - Consultancy organisations engaged by utilities
 - Providers of basic power technology, equipment, products and services
 - Marketers of IT-based products and services such as SCADA, GIS and metering
 - Marketers of enterprise software solutions such as ERP, CRM and billing systems
 - Communication/Connectivity solution providers
 - Renewable energy developers (rooftop solar and wind)
 - Data centre solution providers
 - IT hardware manufacturers
 - Outsourcing firms
 - Sector regulators and policymakers
 - HR and training consultants
 - Energy managers and auditors
 - Energy traders
 - Other power sector professionals
 - Etc.

AGENDA/STRUCTURE

KEY TRENDS AND OUTLOOK

- ❖ What have been the key IT and OT-related trends in the power sector?
- ❖ What are some of the recent developments in this regard?
- ❖ What are the key issues and concerns? What is the outlook for the sector?

UPDATE ON KEY GOVERNMENT PROGRAMMES

- ❖ What has been the progress under various government programmes (IPDS, R-APDRP, DDUGJY, NSGM, etc.)?
- ❖ What has been the implementation experience so far and key learnings?
- ❖ What are the next steps? What are the key areas of concern?

UTILITY PERSPECTIVE

- ❖ What are some of the key IT-OT initiatives taken by utilities so far?
- ❖ What are the new and emerging requirements?
- ❖ What are the future plans? What are the IT-OT related issues and concerns?

REGULATORY PERSPECTIVE

- ❖ What is the regulator's perspective on the adoption of IT-OT by utilities?
- ❖ What are the regulatory measures being taken to encourage technology adoption?
- ❖ What are the biggest issues and concerns from a regulatory standpoint?

UPDATE ON SMART GRID INITIATIVES

- ❖ What has been the progress under the pilot projects?
- ❖ What are their key features and objectives?
- ❖ What are the key issues? What steps are being taken to expedite completion?

SMART METERING UPDATE

- ❖ What are the key drivers for the uptake of smart metering solutions?
- ❖ What has been the progress in smart metering so far?
- ❖ What are the key issues and concerns that need to be addressed for greater uptake of smart metering solutions?

IoT, BIG DATA AND CLOUD

- ❖ What role can IoT, big data and cloud computing solutions play in the emerging power scenario?
- ❖ What has been the trend in the uptake of such solutions by utilities?
- ❖ What are the issues and concerns?

FOCUS ON RENEWABLE ENERGY

- ❖ What are the benefits of IT-OT integration for renewable energy-based plants?
- ❖ What are the areas where IT-OT can be used by renewable energy developers?
- ❖ What has been the experience so far? What are the key issues and challenges?

There will be dedicated segment-specific tracks on generation, transmission and distribution. These will cover areas such as communications, data analytics, real-time monitoring, asset management, regulatory compliance, management information systems and smart grid. The dedicated tracks will also cover focused areas, including:

ASSET MANAGEMENT

- ❖ What are the advanced technologies and solutions that can help utilities in asset management?
- ❖ What is the impact of these solutions on asset reliability, failures & maintenance?
- ❖ What are the investments needed? What are the cost savings that can be achieved?

CYBERSECURITY REQUIREMENTS

- ❖ What are the key cybersecurity risks for utilities?
- ❖ What are the strategies and solutions that can help utilities secure themselves?
- ❖ What has been the utility experience so far? What lessons have been learnt?

COMMUNICATION TECHNOLOGIES

- ❖ What are the new and emerging challenges related to ICT in power systems?
- ❖ What are the technologies and solutions most suited for Indian requirements?
- ❖ What has been the progress with regard to the development of interoperable standards and protocols?

IT-OT FOR GRID MONITORING

- ❖ What role can IT and OT solutions play in monitoring of the transmission grid?
- ❖ What are some of the key advantages of these technologies?
- ❖ What are the challenges in the adoption of these solutions?

IT-OT FOR RENEWABLE INTEGRATION

- ❖ What are the key challenges in the integration of renewable energy?
- ❖ What are the IT-OT solutions that can be used for generation forecasting, optimisation, and balancing and integrating renewables?
- ❖ What has been the experience so far in the adoption of these solutions?

E-MOBILITY REQUIREMENTS

- ❖ What would be the impact of EVs and charging infrastructure on the power sector?
- ❖ What are the IT-OT solutions that can help utilities respond to the EV growth and load profile?
- ❖ What are the utility plans with regard to the adoption of these solutions?

ARTIFICIAL INTELLIGENCE AND BLOCKCHAIN TECHNOLOGY

- ❖ What is the potential of deploying AI and blockchain technology for the power sector?
- ❖ What are the various areas and applications where these solutions can be leveraged?
- ❖ What are the unique benefits? What are the key issues and concerns?

TRACK I - TRANSMISSION

- ❖ What have been the key areas for IT-OT adoption by transcos?
- ❖ What are some of the most relevant and promising IT-OT technologies for transcos?
- ❖ What has been the utility experience? What lessons have been learnt?

Topics Covered

- WAMS
- PMU
- Systems Operation and Management
- SCADA
- System Planning
- Scheduling and Energy Accounting
- Digital Substations
- GIS and RTUs
- Renewable Energy Integration
- Unmanned Substations
- OPGW
- Structural Analysis and Design Software
- Etc.

PARALLEL TRACKS ON GENERATION AND DISTRIBUTION

TRACK II - DISTRIBUTION

- ❖ What have been the key areas for IT and OT adoption by discoms?
- ❖ What are some of the most relevant and promising IT-OT technologies for discoms?
- ❖ What has been the utility experience? What lessons have been learnt?

Topics Covered

- AMR and AMI
- Smart Metering
- SCADA
- Energy Management System
- Enterprise Resource Planning
- CRM
- Outage Management System
- Field Area Network Automation
- Communication Technologies
- E-procurement
- Field Workforce Management
- ADMS
- Smart Grid
- Substation Automation
- GIS
- Asset Management
- Blackouts
- RMUs
- Load Management
- RTU
- Data Analytics
- Net Metering
- IoT and Big Data
- Etc.

TRACK III - GENERATION

- ❖ What have been the key areas for IT and OT adoption by genscos?
- ❖ What are some of the most relevant and promising IT-OT technologies for genscos?
- ❖ What has been the utility experience? What lessons have been learnt?

Topics Covered

- PADO
- Flexibilisation
- Asset and Inventory Management
- Operations Technology
- Enterprise Asset Management
- Asset Monitoring and Control
- Renewable Energy Forecasting
- Fuel Management
- Data Centres
- Predictive Maintenance
- Control and Instrumentation
- E-tendering, etc.

Participating organisations:

This conference elicits strong participation from major organisations including: ABB, Accenture, ACE Control Tech, Actaris, Adani Power, AES, ALSTOM, Analog Devices, Ashok Leyland, A2Z, Avantha Power, Aveva, Avineon India, Bahwan Cybertek, Barco, BHEL, Blue Star, BPL Telecom, CA Technologies, Canada Trade Office, Capgemini, CPRI, CMC Limited, CMS Computers, CES, Consus Consulting, CPCL, Creative Microsystems, CRISIL, Cyient, Datagen Power, Deloitte, Descon, Diamond Power, DPSC, DSCL, Dynalog, EY, Easun Reyrolle, ECIL, Efftronics, Enercon, Energy Infratech,, ESDS, ESRI, ETAP Automation, Fedders Lloyd, Fluentgrid, Fox Solutions, GE, Genus, GIFT, GMR, GTL, Greenko Group, Grove Limited, HCL, HP, Hindustan Controls, Hitachi, Honeywell, Hughes, IBM India, ICRA, ICSA, IFS, Indo Rama Petrochemicals, Infosys, Infotech, Infozech, Invensys, Infor, Itron, India Smart Grid Forum, Jaiprakash Associates, Jal India, JUSCO, Jaypee Ventures, JSPL, KPCL, Kaveri Communications, KLG Systel, KPMG, KPIT, Krohm Solutions, KSK Energy, L&T, L&T -Sargent & Lundy, Lahmeyer, LANCO, Lapp Holding, Leena PowerTech, MagikMinds Software, MCT India, Merchem Limited, M.N. Dastur & Company, Maruti Udyog, METSO, MOXA, Nascent Infotech, NI, NPCL, NPTI, NDMC, NEEPCO, NELCO, NESCO, Nexant, Nish Automation, NSOFT (INDIA), Opower, OMNI AGATE Systems, Oracle, OSI, Parbati-Koldam Transmission Co., PCI Limited, Perfect Controls, PFC Consulting, Phoenix IT, Prasanna Technologies, PMAS, PMI Associates, PTC, PowerOne Data, Powertec, PwC, ProArch Solutions, Quadrant Consultants, Ramco, Rare Enterprise, REC, Red Hat, Regency Infotech, Reliance, Reli-e-Marg Software, Riken Instrumentation, RMSI, Rockwell Automation, Rolta, RS Consultant, RuggedCom, Sai Computers, SAS, SAI Electricals, SAP, SBI Caps, Schneider Electric, SCOPE, Secure Matrix, Secure Meters, Sensus, Siemens, Softspin Services, SPANCO, SPML, SSM Infotech, ST Microelectronics, State Grid Corporation of China, Steag, Stelmec, Sterlite, Sun Microsystems, Suntech Group, TCS, TERI, Technobridge Software Solutions, THDC, The New India Assurance Co., Tirumala, Torrent Power, TVA Star Engineering Solutions, Unique Structures and Towers, Va Tech Ventures, Vizag Steel, Wipro, Zyxel Technologies etc.

A key highlight of the conference is the major participation by public/private utilities. Some of these include:



Organisers

The conference is being organised by **India Infrastructure Publishing**, the leading provider of information on the infrastructure and power sectors. It publishes **Power Line**, **Renewable Watch**, **Smart Utilities** and **tele.net** magazines. It also publishes a series of reports on the energy sector including **Power Transmission in India**, **Power Distribution in India**, **Solar Power in India**, **Captive Power in India**, **Hydro Power in India** and **Wind Power in India**. The company also publishes **Power News** (a weekly newsletter) and the **Power Line Directory and Yearbook**.

SNAPSHOTS FROM THE PREVIOUS YEAR



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Registration Form

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Registration Fee

| Delegates | Before August 10, 2018 | | | | After before August 10, 2018 | | | |
|-----------------|------------------------|-----------|-----------|-----------|------------------------------|-----------|-----------|-----------|
| | INR | GST @ 18% | Total INR | Total USD | INR | GST @ 18% | Total INR | Total USD |
| One delegate | 22,500 | 4,050 | 26,550 | 443 | 18,000 | 3,240 | 21,240 | 354 |
| Two delegates | 37,500 | 6,750 | 44,250 | 738 | 30,000 | 5,400 | 35,400 | 590 |
| Three delegates | 52,500 | 9,450 | 61,950 | 1033 | 42,000 | 7,560 | 49,560 | 826 |
| Four delegates | 67,500 | 12,150 | 79,650 | 1,328 | 54,000 | 9,720 | 63,720 | 1,062 |

- There is a special low fee of Rs 5,000 per participant for power distribution companies (public), state-owned transcos, regulatory authorities, research organisations and academic institutions. GST @ 18 per cent is applicable on the registration fee.
- Registration will be confirmed on receipt of the payment.
- To register online, please log on to <http://indiainfrastructure.com/conf.html>

Payment Policy:

- Full payment must be received prior to the conference.
- Conference fee includes lunch, tea/coffee and conference material.
- Payments for "early bird" registrations should come in before the last date of discount. Discount offers cannot be combined with any other offer.
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