



3rd Edition

DIGITALISATION OF POWER PLANTS

A VIRTUAL CONFERENCE

Improving Efficiency, Flexibility, Access to Data and Connectivity

June 29-30, 2020

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Organisers:

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Digitalisation of Power Plants

Mission

- The importance of digitalisation has never been clearer for power plant managers. In light of the Covid pandemic crisis, ensuring uninterrupted energy supply in a cost efficient and reliable way is paramount. Deploying digital solutions can support the generation industry's efforts to transition to new models of efficient and sustainable supply, thereby helping them to develop smarter approaches to increase reliability, improve quality, as well as manage plant operations remotely, while ensuring social distancing.
- A broad array of new and disruptive technologies including artificial intelligence, IoT, machine learning, blockchain, sensors and analysers, and robotics are helping power plant owners devise new ways of achieving efficiency gains from the existing operations and enabling new and more flexible business models.
- Regardless of the source of power generation, digital technologies are capable of delivering results for conventional power plants, including coal and gas, or for plants that are based on renewables, including hydro. Using digital solutions, coal-based power plants can reduce emissions by enabling fuel analysis and better combustion performance, as well as improve flexibility to effectively manage the impact of cycling and increase the share of renewables. Further, the digital transformation of hydropower and renewable energy plants allows monitoring and control of operations remotely and guarantees shorter response time to possible events.
- Meanwhile, with digital twin, power generators can use simulation and modelling systems to prevent outages and optimise daily power production. Plant safety and O&M are the other key areas where digitalisation can have a significant impact by enabling real-time tracking for predictive, preventive and condition-based maintenance programmes.
- As power generators move towards implementing their digital transformation strategies, data security will become a key aspect. Cybersecurity is a cause for concern for power plant managers exploring digital deployments. Gencos, therefore, need to ensure that their risk management and response practices are aligned with a digitally controlled environment.
- Net net, traditional utilities, which are seeking to adapt to the situation at hand, can utilise the opportunity to implement digital solutions that would enable them to meet the new market demands as well as ensure successful business recovery in the aftermath of the pandemic.
- **The mission of this virtual conference is to provide a platform to highlight the needs and requirements of gencos for digitalisation, examine the potential of digitalisation for the power generation industry, and discuss the issues and concerns that need to be addressed for the successful uptake of digital technologies and solutions. It will also showcase the latest innovations and the most promising and relevant technologies.**

Target Audience

The conference is targeted at:

- Power plant operators (thermal, hydro, gas)
- Equipment manufacturers (steam boilers, turbines, generators, etc.)
- Technology providers
- Solar and wind power developers
- Independent power producers
- Providers of basic power technology, equipment, products and services
- Other power sector professionals
- Research and development organisations
- Engineering consultants
- Consultancy organisations engaged by utilities
- Cybersecurity firms
- Energy managers and auditors
- Certification and inspection companies

The conference will be useful for:

- IT officials/managers in the power generation segment
- Managers of power plants (public/private/captive)
- Cybersecurity professionals
- Top and middle-level operations managers involved in digital plants, IoT, cloud computing, or big data

What differentiates our conferences?

- The **agenda** is developed by our researchers, who track the sector round the year. It is thus **relevant** and **topical**. It is not driven by a particular organisation and does not have a particular slant.
- The **speakers** are **professionals** and **experts** involved in the sector, not a mix of ambassadors, ministers, celebrities and business owners.
- The conferences do not just comprise panels and speeches; they provide a good mix of **expert presentations** and **case histories**, and of course **panel discussions**.
- We have **representation** from **across the country**, as is the case at our physical conferences too.
- Each **stakeholder group** – **policymakers**, **developers**, **financiers**, **consultants** and **relevant NGOs** – is represented at our conferences.
- The moderators merely ask the questions. The **stars** are the **speakers** themselves.
- The **sessions begin and end on time**.
- There is adequate time for a **Q&A session** with **each speaker**. These are not "hit and run" speeches.
- The **delegates** are **professionals** who are vested in the sector, and are not just assembled through social media.
- The **participants** in each conference receive a **concise report outlining the key facts, trends and issues** in the sector.
- A **recap** of the conference is also made available to reinforce the key takeaways.

AGENDA/STRUCTURE

DIGITALISATION TRENDS, DRIVERS AND REQUIREMENTS

- ❖ What have been the key digital technology trends in the power generation segment?
- ❖ What have been the key drivers for the uptake of digital solutions by gencos?
- ❖ What are the key digital issues and concerns? What is the outlook?

GENCO PERSPECTIVE

- ❖ What are the new and emerging genco requirements?
- ❖ What has been the trend in the adoption of digital solutions so far?
- ❖ What are the digital strategies and plans? What are the key issues and concerns?

DIGITALISATION: FOCUS ON COAL-BASED POWER PLANTS

- ❖ What are the potential benefits of digitalisation for coal-based power plants?
- ❖ What are the new and promising digital solutions?
- ❖ What has been the trend in the uptake so far? What are the concerns?

DIGITAL SOLUTIONS FOR FLEXIBILISATION

- ❖ How can digital solutions improve flexibilization of power plants?
- ❖ What are the digital solutions available for meeting flexibilisation requirements?
- ❖ What are the performance gains from these solutions? What are the limitations?

DIGITALISATION: FOCUS ON HYDROPOWER PLANTS

- ❖ What is the potential for digitalisation in hydropower plants?
- ❖ What are some of the new digital solutions and offerings for hydro projects?
- ❖ What has been the experience so far?

DIGITALISATION: FOCUS ON RENEWABLE ENERGY PLANTS

- ❖ What are the most relevant digital solutions for renewable energy plants?
- ❖ What are the areas/processes where digital solutions can be deployed?
- ❖ What has been the industry experience so far?

DIGITAL PRODUCTS AND SERVICES

- ❖ What products (sensors, actuators, controllers, etc.) are the most relevant for the digitalisation of power plants?
- ❖ What has been the trend in deployment?
- ❖ What have been the performance gains?

DIGITALISING O&M OPERATIONS: FOCUS ON BUSINESS OPTIMISATION

- ❖ What are the new and emerging O&M related challenges for gencos?
- ❖ What role can digital technologies play in the O&M of power plants?
- ❖ What are the new and emerging solutions in this regard?

TECHNOLOGIES FOR ASSET MANAGEMENT: FOCUS ON EQUIPMENT RELIABILITY

- ❖ How can digital technologies help in optimising asset management?
- ❖ What are the new and emerging digital solutions for asset management?
- ❖ What are the benefits and cost savings?

ROLE OF IOT AND ANALYTICS

- ❖ How can gencos leverage IoT and cloud for improved performance?
- ❖ What has been the experience so far?
- ❖ What are the key issues and concerns?

REMOTE MONITORING AND DIAGNOSTICS

- ❖ What are the remote monitoring/ diagnostics solutions for power plants?
- ❖ What are their features?
- ❖ What has been the experience so far?

EMERGING TECHNOLOGIES - AI, ML, BLOCKCHAIN, AR, VR

- ❖ What is the potential of new and emerging technologies such as AI, ML, blockchain, augmented and virtual reality?
- ❖ What are the areas where these technologies can be applied?
- ❖ What are the challenges and limitations in deploying them?

CYBER RISK MITIGATION

- ❖ What are the cybersecurity risks that plants face as they move towards connected applications?
- ❖ What are the cyber risk strategies and solutions that can be considered?
- ❖ What has been the uptake of such solutions by gencos so far?

DIGITAL SOLUTIONS FOR SAFETY AND MAINTENANCE: FOCUS ON RESILIENCE AND SECURITY

- ❖ What is the potential of digitalisation in improving the safety of power plants?
- ❖ What are the new and promising digital solutions?
- ❖ What has been the experience so far?
- ❖ What are the issues and concerns?

DIGITALISING OUTAGES

- ❖ What are the digital solutions for reducing plant and equipment downtime and outages?
- ❖ What is their performance compared to traditional methods?
- ❖ What has been the experience so far?

Previous Participants

Some of the organisations that have attended our related conferences include: Accenture, ADJ Engineering Pvt Ltd, Aerzen Machines India, AkzoNobel India Ltd, Amines & Plasticizers, Andritz Hydro, ARS Energy Pvt. Ltd, Arudra Engineers, Atha Group, AVEVA Information Technology India Pvt., Balkrishna Industries, Banyan Tree Advisors Pvt. Ltd, BCG, Beijing SPC Environment, Bharat Heavy Electricals, BMW Steels Ltd, Bray Controls, BTL EPC, Busch Vacuum, Bygging India, Centre for Fly Ash Research & Management, Central Electricity Authority, CESC Limited, Chemical Process Equipments, Chemical Process Piping, Chhattisgarh State Power Generation Company, CLP India, Coastal Gujarat Power, Cottagong S.A., CP Piping, CPPE, CSRI NEERI, Damodar Valley Corporation, DB Power, Demech Chemical Products, Druk Green Power Corporation Ltd, GSECL, GSECL-UTPS, EagleBurgmann India, Edelweiss Asset Reconstruction Company, Edwards India Pvt. Ltd, Elara Capital, Emerson, Environnement SA India Pvt. Ltd, Ferbeck International, FLSmith Pvt Ltd, Forbes Marshall, Furnace Fabrica (India), GE Power India Limited, GE South Asia, Greatall Dynamic Co Ltd, GSECL, GSK Powertel Pvt Ltd, H2L-Vedanta, Haryana Power Generation Corporation, HEG, Hexagon, Hindustan Petroleum Corporation, Hindustan Zinc, HPGCL, ICRA, India Uniper Power Services, Indiana Conveyers, Indus Energy Consultants, International College of Financial Planning, IOCL, ION Exchange (India) Ltd, J.K. White Cement Works Division, Jaiprakash Associates, Jaiprakash Power Ventures, Jay Pee Power Projects (Jai Prakash Power Ventures), Jaypee Bina Thermal Power Plant, Jindal Power, JK Cement, SW Energy Limited, Kepco Plant Service & Engg, KSB Pumps, Lanco Anpara Power Limited, Lanco Power, Larsen & Toubro Limited, Lubrizol Advanced Materials, Maco Corporation, Maharashtra State Power Generation Co. Ltd, Maithon Power, Mascot Capital & Marketing, MEG, Ministry of Power, MSEB Holding Company, Multi-Act Equity Consultancy, Munters India, Nabha Power Limited, National Fertilizers, National Power Training Institute, Nevco Engineers, NHPC Limited, NLC India Limited, NTPC Limited, Odisha Electricity Regulatory Commission, Organo Corporation, Oriental Nicco Projects Pvt Ltd, Outokumpu, Paramount, Praj Industries, PTPS, RattanIndia Power, Reliance Jamnagar, RRWNL, Rudis LLC Trbovje, Sangir Plastics, Securities Investment Mgt Pvt Ltd, Sembcorp Green Infra Limited, Sick India, Siemens, Simona India, SKI Carbon Black (India) Private, SPC Environment Protection Tech, SRF, Stalwart Advisors, STEAG Energy Services (India) Pvt. Ltd, Sulzer Pumps India, Sunrise Industries (India) Ltd, Sunrise Polymers, Takalkar Power Engineers & Consultants Pvt. Ltd, TANGEDCO, Tata Consulting Engineers, Tata Power, Tata Power Solar Systems Ltd, Tata Steel, Technical Drying Services (Asia), Technofab Systems, Teesta Urja Limited, Tenova Delkor, TERI, The Tata Power Company, Thermax Limited, Thermo Fisher Scientific, TIMEIC Industrial Systems, Torrent Power, Toshiba, Toyo Engineering, U.P. Rajya Vidyut Utpadan Nigam Ltd, UPRUVNL, Voith Digital Solutions India Pvt. Ltd., Voith Hydro Private Limited, Weir Minerals, West Bengal Power Development Corporation, Yantra Harvest, etc.

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Registration Fee

	INR	GST@18%	Total INR	Total USD
1 Login	9,000	1,620	10,620	150
2 - 3 Logins	15,000	2,700	17,700	250
4 - 5 Logins	21,000	3,780	24,780	350
6 - 9 Logins	27,000	4,860	31,860	450
10 - 20 Logins	33,000	5,940	38,940	550

- There is a 30 per cent discount before June 5, 2020
- There is a 15 per cent discount before June 16, 2020
- 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 <https://indiainfrastructure.com/events/3rd-annual-conference-on-digitalisation-of-power-plants/>

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Organisers

The conference is being organised by **India Infrastructure Publishing**, the leading provider of information on the infrastructure sectors through magazines, newsletters, reports and conferences. The company publishes **Power Line** (India's premier power magazine), **Indian Infrastructure** and **Renewable Watch**. It also publishes a series of research reports on the power sector including **Coal-based Power Generation in India**, **Hydro Power Market in India**, **Solar Power Market in India**, **Captive Power Plant in India**, etc. It also publishes **Power News** (a weekly newsletter) and a **Power Line Directory and Yearbook**.

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