



COAL



GAS



HYDRO



WIND

2nd Edition

DIGITAL POWER PLANTS ASIA

VIRTUAL CONFERENCE

Emerging Requirements, New Technologies and Opportunities

April 6-7, 2022

Organised by:

POWERLINE



SOUTHEAST ASIA
INFRASTRUCTURE

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MISSION

- Digital power plants hold big promise for Asia's emerging power sector. Digital solutions and tools make power plants more connected, intelligent, reliable and efficient. These solutions are increasingly being deployed for real-time performance optimisation, regulatory compliance, emission monitoring as well as for tackling volatile market conditions.
- The role of coal-based power generation in Asia's generation mix is changing rapidly. From being the main source of baseload power, coal has now taken a more supportive role. Developers are adopting digital tools along with existing control systems to maintain plant performance under variable loads. For instance, digital tools for combustion, temperature control and optimisation of the fuel mix; pattern recognition software; and fatigue monitoring systems are enabling flexible load operations.
- Digital solutions are also being used for modernising plant asset management and operations and maintenance (O&M) strategies. With AI, ML and IoT, the developers are transitioning to predictive and preventive maintenance strategies, condition-based monitoring and reliability centric maintenance. The new-age plant maintenance strategy is based on real-time performance analysis, equipment health monitoring and failure history. It optimises O&M expenses, allows early prediction of faults, reduces plant outages and minimises equipment downtime.
- In remote operations and fleet monitoring, the optimisation centre offers 24x7 monitoring of fleet reliability and performance parameters of all plants centrally. Digital dashboards give operators quick access to real-time plant performance, and provide automated notifications, performance monitoring and reporting, and diagnostics of critical plant equipment and systems. Furthermore, digital twins constructed using smart sensors, and simulation models enable automatic real-time analysis of plant parameters.
- Overall, Asian power utilities are going big on their digital budgets to navigate through disruptions in the power sector. The digital transformation of power plants will gain further traction as countries deepen the decarbonisation of their economies and further advance their clean energy goal, as committed at the recent CoP26 climate summit.
- That said, these technologies come with increased threat of cyber intrusions and enabling robust cybersecurity technologies is paramount. On the data analytics front, while a digital power plant generates a lot of data, deriving insights from the data has been limited so far. The other challenges in the digital transformation of power plants are the lack of skilled manpower and financial constraints. Going forward, a clear vision and well-defined roadmap for a holistic digital transformation will be critical.
- The mission of this virtual conference is to highlight the role of digital tools and solutions to meet the evolving market requirements, discuss the experience and plans of generation companies for digital transformation, and understand the issues and concerns. It will also provide a platform to showcase the most promising and relevant digital technologies, and industry best practices.

DIGITALISATION NEEDS AND REQUIREMENTS

- ❖ What is the nature and magnitude of digital transformation of power plants in Asia?
- ❖ What are the key issues and challenges?
- ❖ What will the key future technologies and trends? What is the outlook?

INDUSTRY PERSPECTIVE: EXPERIENCE AND PLANS OF LEADING GENCOs

- ❖ What has been the genco experience in the digitalisation of plant operations?
- ❖ What are the new and emerging requirements of power gencos?
- ❖ What are the future plans and priorities? What are the biggest issues and challenges?

FOCUS ON THERMAL POWER PLANTS

- ❖ What are the most promising digital tools and solutions for TPPs?
- ❖ What has been the experience so far?
- ❖ What are the issues and concerns? What is the outlook?

O&M STRATEGIES

- ❖ What are the key digital tools and solutions for power plant O&M?
- ❖ What has been the uptake so far?
- ❖ What are the biggest challenges and lessons learnt?

ASSET MANAGEMENT

- ❖ What has been the uptake of digital tools and technologies in asset management of plants?
- ❖ What are the key benefits derived?
- ❖ What are the issues and challenges?
- ❖ What are the new technologies/innovations being considered?

REMOTE MONITORING AND CONTROLS

- ❖ What has been the genco experience in remote monitoring and control of power plants?
- ❖ What are the key technology solutions and tools?
- ❖ What are the areas of concern?

FOCUS ON FLEXIBILISATION

- ❖ What are the emerging requirements of power plants with the influx of renewables?
- ❖ What are the most promising digital tools and solutions to enable flexible operations of plants?
- ❖ What has been the experience so far? What are the issues & concerns?

DIGITAL TWINS

- ❖ What are the key use cases of digital twins for TPPs?
- ❖ What has been the uptake so far in Asian power plants?
- ❖ What are the issues and challenges?

FOCUS ON HYDRO POWER PLANTS

- ❖ What are the most promising digital tools and solutions for hydro power plants?
- ❖ What has been the experience so far?
- ❖ What are the issues and concerns? What is the outlook?

FOCUS ON RENEWABLE ENERGY PLANTS

- ❖ What are the most promising digital tools and solutions for renewable energy plants?
- ❖ What has been the experience so far?
- ❖ What are the issues and concerns? What is the outlook?

IoT AND DATA ANALYTICS

- ❖ What is the role of IoT and data analytics in a digital power plant?
- ❖ What has been the experience so far? What are the key use cases?
- ❖ What are the issues and concerns? What have been the lessons learnt?

NEW TECHNOLOGIES – AR, VR, AI, ML AND ROBOTICS

- ❖ What are the key uses cases of new technologies like AI, ML and robotics in a digital power plant?
- ❖ What has been the uptake so far?
- ❖ What are the issues and challenges?

FUEL MANAGEMENT

- ❖ What are the new and emerging requirements of gencos for fuel management and handling?
- ❖ What are new and emerging digital tools and solutions? What has been their uptake?
- ❖ What are the limitations?

CYBERSECURITY

- ❖ What are the cybersecurity threats and risks for digital power plants?
- ❖ What are the industry best practices and solutions for managing cybersecurity-related risks?
- ❖ What has been the uptake of such solutions by gencos so far? What are the issues and concerns?

TARGET AUDIENCE

The conference will draw participation from:

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

PREVIOUS EDITION'S SPEAKER LIST

(alphabetic order by surname)

- ❖ Kamal Ajitsaria, Head, Technology, **Adani Power**
- ❖ Narsingh Chaudhary, Executive VP & MD, Power – Asia, **Black and Veatch Consulting**
- ❖ Lee Song Chow, Senior Manager of Digital Strategy and Services, **Tenaga Nasional Berhad**
- ❖ S.K. Dutta, GM & HOD C&I, **NTPC**
- ❖ Jagadish Gattu, CEO, **UptimeAI**
- ❖ Ulf Grohmann, Director Digital Hydro Asia, **Voith Hydro**
- ❖ Neeraj Gupta, Solution Advisor, Asset Management, **IBM**
- ❖ Litthanoulouk Laspho, Director of Electricity Generation Planning Division, **Électricité du Laos**
- ❖ Max Y. Lin, Partner, **Deloitte**
- ❖ Chatchai Mawong, Director of Hydro and Renewable Energy, **Electricity Generating Authority of Thailand**
- ❖ Vishal Mehta, Managing Director & Partner, **BCG**
- ❖ Mohd Nazim Bin Abdul Razak, Principal Engineer – Technical Services, **Tenaga Nasional Berhad**
- ❖ Mohd. Nazirul Mubin Abd. Rahman, Manager, Asset Management, **TNB Renewables Sdn. Bhd.**
- ❖ Sandeep Pauer , Solution Consultant, Digital Transformation, **Honeywell**
- ❖ Mitul Shah, Partner, **KPMG**
- ❖ Madan Timsina, Deputy Managing Director, **Nepal Electricity Authority**
- ❖ Tandin Tshewang, CEO, **Bhutan Automation and Engineering (Subsidiary of Druk Green Power)**
- ❖ Varun Verma, Strategic Consultant – APM, **AVEVA**

PREVIOUS PARTICIPANTS

AECOM, Andritz Hydro, ARS Energy, Arudra Engineers, Atha Group, AVEVA Information Technology, Axcend Automation and Software Solutions, Banyan Tree Advisors, Barapukuria Coal Mining Company, BCG, Beijing SPC Environment, Bentley, Bharat Heavy Electricals, Bhutan Automation, BMW Steels, Bokaro Power Supply Company, Bpcl, Bray Controls, BTL EPC, Busch Vacuum, Bygging India, Central Electricity Authority, Centre for Fly Ash Research & Management, Century Pulp And Paper, CESC, Chemical Process Equipments, Chemical Process Piping, Chhattisgarh State Power Generation Company, CLP India, Coastal Gujarat Power, Cottagon S.A., CP Piping, CPPE, CSRI NEERI, Damodar Valley Corporation, DB Power, Demech Chemical Products, Druk Green Power Corporation, EagleBurgmann India, Edelweiss Asset Reconstruction Company, Eden Inc Berhad, Edwards India, EGAT, Elara Capital, Emerson, Enmas O&M Private, Environnement SA India, Envy Energy Consultants, Fairway Enterprises Company, Pochampalli-Krishnagiri, Ferbeck International, FLSmidth, Forbes Marshall, Furnace Fabrica (India), GE Power India, GE South Asia, Ge Triveni, Genting Energy, Genting Sanyen Power, GMR, GMR Bajoli Holi Hydro Power, Greateall Dynamic Co, Gs E&C Delhi, GSECL, GSECL-UTPS, GSK Powertel, H2L-Vedanta, Haryana Power Generation Corporation, HEG, Hexagon, Himachal Pradesh Hydro Power Producers Forum, Hindalco, Hindustan Petroleum Corporation, Hindustan Zinc, Honeywell, HPGCL, Hpsebl, Hsil, Hydro Forum, ICRA, India Uniper Power Services, Indiana Conveyers, Indus Energy Consultants, International College of Financial Planning, IOCL, ION Exchange (India), Jaiprakash Power Ventures, Jay Pee Power Projects (Jai Prakash Power Ventures), Jaypee Bina Thermal Power Plant, Jfe Engineering, Jindal Power, JK Cement, Kapar Energy Ventures Sdn Bhd, KCS, Kepco Plant Service &Engg, Khang Truong Thinh Co., Kholongchhu Hydro Electric Project, Doksum, Kholongchhu Hydro Energy, Kirloskar Brothers, Konecranes And Demag Ltr, Korea Plant Service & Engineering, KSB Pumps, Kutch Chemical Industries, L&T Power, Lanco Power, LancoAnpara Power, Larsen & Toubro, Lubrizol Advanced Materials, Maco Corporation, Maharashtra State Power Generation Co., Maithon Power, Malakoff Corporation, Mascot Capital & Marketing, MEG, Ministry of Power, MSEB Holding Company, Multi-Act Equity Consultancy, Munters India, Musteq Hydro Sdn Bhd, Nabha Power, Narasaraopeta Enginneing College, National Fertilizers, National Power Training Institute, Natron, Nayara Energy, Nepal Electricity Authority, Nevco Engineers, NHPC, NLC India, NTPC, Odisha Electricity Regulatory Commission, Odisha Hydro Power Corporation, Odisha Power Generation Corporation, Omicron India, Organo Corporation, Oriental Nicco Projects, Outokumpu, Pacificlight Power, Pacificlight Power Pte, Paramount, Petrofac Engineering Services, Phpa-I, Wangdue, Bhutan, Pragati Power Corporation (Govt Of Delhi), Praj Industries, Prayagraj Power Generation Company, Pt Lestari Banten Energi, Pt. Lestari Banten Energi, Pt-Orion-Nusantara, PTPS, Punatsangchhu-I Hydroelectric Project Authority, Quest Global, Ranhill Consulting, RattanIndia Power, Reliance Industries, Reliance Jamnagar, Remit Hydro, Retired From Ohpc, RRVVNL, Rudis LLC Trbovje, Rungta Mines, Sahara Maintenance Services Co And, San Telequip, Sangir Plastics, Sarawak Energy, Securities Investment Mgt, Sembcorp Green Infra, Sepc Power Private, Shalaka Group, Sick India, Siemens, Siemens Gamesa Renewables, Simona India, SKI Carbon Black (India) Private, SPC Environment Protection Tech, SRF, Stalwart Advisors, STEAG Energy Services (India), Sulzer Pumps India, Sunrise Industries (India), Sunrise Polymers, Suzlon Energy, SW Energy, Takalkar Power Engineers & Consultants, TANGEDCO, Tata Aig, Tata Consulting Engineers, Tata Power, Tata Power Renewable Smart Grids, Tata Power Solar Systems, Tata Steel, Tataaig General Insurance, Technical Drying Services (Asia), Technofab Systems, TeestaUrja, TenovaDelkor, TERI, The Tata Power Company, Thermax, Thermo Fisher Scientific, TMEIC Industrial Systems, Tnb Janamanjung Sdn. Bhd, Tnb Malaysia, Tnb Renewables Sdn. Bhd., Torrent Power, Toshiba, Toyo Engineering, Travancore Titanium Products Trivandrum, U.P. RajyaVidyutUtpadan Nigam, UJVN, UPRUVNL, UptimeAI, Veda Next-Gen Energy, Vedanta - Aluminium Business, Vidullanka, Voith Digital Solutions India, Voith Hydro, Weir Minerals, West Bengal Power Development Corporation, etc.

DELEGATE FEE

	Standard price
1 Logins	USD 250
2-3 Logins	USD 400
4-5 Logins	USD 550
6-9 Logins	USD 700
10-20 Logins	USD 850

- Registration will be confirmed on receipt of the payment.

TERMS AND CONDITIONS

Payment Policy

- ❖ Full payment must be received prior to the conference. For discounted rates, the payment must be received on or before the discount expires.
- ❖ Substitution and name changes are welcome at no extra charge.

Disclaimer

- ❖ Indian Infrastructure shall assume no liability whatsoever in case the event is postponed or cancelled due to a fortuitous event or unforeseen occurrence that renders the performance of this conference impracticable, illegal or impossible. For purpose of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency.
- ❖ Please note that it may become necessary for reasons beyond the control of the organisers to make alterations to the content and timing of the programme or speakers.

Organiser

The conference is being organised by **India Infrastructure Publishing**, the leading provider of information on the infrastructure sectors. The company publishes **Power Line**, **Power Line South Asia** and **South East Asia Infrastructure** magazines.

Power Line (www.powerline.net.in/) is a premiere magazine for the Indian power sector. It covers all segments of the sector – generation, transmission and distribution. It tracks key developments, analyses major trends, profiles noteworthy organisations, interviews top managers, features opinions of industry experts, tracks financing activity, covers technology developments, profiles people of interest, and provides key data and statistics.

Power Line South Asia – a special publication from India Infrastructure Publishing aims to provide information on key trends, financing scenario, major developments, and highlight opportunities in the power sector (across the generation, transmission and distribution segments) in the following South Asian countries: Bangladesh, Bhutan, Nepal, Sri Lanka, Afghanistan, Pakistan, Maldives and India.

South East Asia Infrastructure (www.southeastasiainfra.com) is a leading source of information on infrastructure development in Southeast Asia. It tracks key developments, analyses emerging trends, features industry players and perspectives, highlights key initiatives, and profiles exemplary projects.

GET IN TOUCH

For registration and sponsorship opportunities:

Monish Grover

Conference Cell

Mobile: +91-9999401099

Email: monish.grover@southeastasiainfra.com