3rd Edition

A VIRTUAL CONFERENCE

DESALINATION IN INDIA

Progress & Experience, New Technologies & Opportunities

September 14, 2021

Lead sponsor so far*: HACH Be Right™ PALL Water

4th Edition

A VIRTUAL CONFERENCE

WATER MANAGEMENT IN THERMAL POWER PLANTS

Experience, Best Practices and Emerging Technologies

September 15, 2021

Lead sponsor so far*: HACH Be Right™ PALL Water

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Indian Infrastructure

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DESALINATION IN INDIA

Mission

- The desalination capacity in India is expected to grow from 650 million litres per day (mld) in 2021 to 2,800 mld in 2030. Around 725 mld of desalination capacity is being set up for industrial use. On the municipal front, Andhra Pradesh, Gujarat, Maharashtra, Odisha and Tamil Nadu have witnessed a significant increase in desalination demand. At least 1,500 mld of desalination capacity will be added over the next five to six years in the municipal segment.
- The increasing demand for freshwater and stringent groundwater withdrawal regulations are the key factors driving desalination in coastal states. A large number of domestic and global private players have entered the market. Meanwhile, the return on investment for desalination projects is gradually improving with the energy costs declining rapidly.
- Technologies such as reverse osmosis, and multistage and multiple-effect distillation have been successfully deployed for large-scale facilities. Other cost-effective advanced desalination technologies such as electrodialysis, forward osmosis and membrane distillation are also being tested. New equipment, instrumentation and control technologies are being deployed to reduce the high energy costs associated with the use of renewable energy sources such as wind and solar to operate plants. Over the next two to three years, at least Rs 225 billion will be invested in setting up the planned desalination projects, thus presenting significant opportunities to key stakeholders.
- **The mission of this one-day virtual conference is to examine the trends and progress, identify the upcoming projects and opportunities in the municipal and industrial segments, highlight the experience of utilities and private players, and discuss the unresolved challenges. The conference will also provide a platform to showcase recent advancements and innovations in technology and equipment.**

Previous participants

The companies that participated in our previous conferences on "**Desalination in India**" include: Adani power, AECOM, Ahmedabad Municipal Corporation, Alfa Laval (India), Alom Poly Extrusions, ANDHRA PRADESH POWER GENERATION CORPORATION LIMITED, APGENCO, APTRANSCO, Aqua Designs India, AUMA India, Bangalore Water Supply & Sewerage Board, BASF India, BERC BIHAR, Bhagalpur Smart City, Bharat Heavy Electricals Limited, Black & Veatch, Bosch, Brasten Group, Brg iron and steel co Pvt Ltd, C.R.I. Pumps, Center for Fly Ash Research & Management, Central Ground Water Board, Central Pollution Control Board, CESC, CH2MILL, Cinch Seal, CIPET, Bhubaneswar, Clearford Water Systems Inc., Clyde Bergemann India, Consortium for DEWATS Dissemination Society, CPCB, CPHEEO MOUD, CPWD, Crane Process Flow Technologies, CRISIL Infrastructure Advisory, CSIR-CSMCRI, DCM SHRIRAM LIMITED, Damodar Valley Corporation, Danfoss Industries, Delhi Engineers Construction Company, Delhi Jal Board, Delhi State Industrial and Infrastructure Development Corporation, Deloitte, Department of Science & Technology, Desein, Dhanraj Enterprize, Dhariwal Infrastructure, DHR Holding India, Doosan Power System India, Eco Enviro Consultants, Ecol Agro Venture Pvt Ltd, Ecotech, Encito Advisors LLP, Electrosteel Castings, Engineers India, Enviro Analysts & Engineers, Essar Power, Essar Power Gujarat, FAM Technologies, Flowserve Corporation, Forbes Marshall, Ghaziabad Municipal Corporation, Greater Hyderabad Municipal Corporation, GIZ, GPCU, Gradiant India, Greater Noida Industrial Development Authority, GreenTree Global, GSECL, Gujarat International Finance Tec-City Company, Gujarat Urja Vikas Niagm, Gurgaon Municipal Corporation, Gurugram Metropolitan Development Authority, Haryana Irrigation Department, HCC, Hitachi Zosen, HMEL, HPGCL, HYDRANAUTICS, IFC, INDAR, Indian Institute of Technology Bombay, Jash Engineering, Jhajjar Power, JITF Water Infrastructure, JSW Energy, Jupl, Kanpur Municipal Corporation, KNK Projects, L&T, L&T Construction, L&T Power, Macmet Engineering, Maharashtra Pollution Control Board, Mascot Dynamics, McElroy Sales and Service India, McNally Bharat Engineering Company, Ministry of Water Resources, MM Aqua Technologies, Municipal Corporation Gurgaon, Municipal Corporation Jaipur, Municipal Corporation Karnal, Municipal Corporation Moradabad, Municipal Corporation Panchkula, Municipal Corporation of Greater Mumbai, Nabha Power, Nagpur Smart City, National Institute of Ocean Technology, National Institute of Urban Affairs, National Institute of Technology Warangal, National Mission Clean Ganga, National Projects Construction Corporation, North Delhi Municipal Corporation, NJSEI, NTPC, NPCC, ONGC, Organica Water, Outokumpu India, Pimpri Chinchwad Municipal Corporation, Praj Industries, Premier Tech Aqua Systems India, PSG College of Technology, Pune Municipal Corporation, Punjab Pollution Control Board, Punjab Water Supply & Sewarage Board, PWD, Punjab Water Supply and Sewerage Board, PVP Institute of Technology Budhgaon Sangli, Qua Water Technologies, Raj West Power, Rebis India, Rehau Polymers, Rex Polyextrusion, RODIC CONSULTANTS, Saisanket Industries, Schwing Stetter (India), Sekisui Chemical India, SFC Environmental Technologies, Shah Technical Consultants, Shubham Acqualink, SMS Envocare, SNC-Lavalin Infrastructure, SQWEC, SRMIST, STEAG Energy Services (India), Sudarshan Chemical, Suez India, Sulabh International Social Service Organisation, Sumitomo Corporation India, Suzalkem Technologies, Swach Environment, Taisei Group of Companies, Tamil Nadu Water Investment Company, Tata Consulting Engineers, Tata Power Company, Tata Projects, Tata steel, Technofab Engineering, Teyma India, Thane Municipal Corporation, The World Bank, Tirupati Municipal Corporation, Triveni Engineering & Industries, UNICEF Gujarat, UP Jal Nigam Allahabad, VAG Valves India, VA Tech Wabag, Vishvaraj Infrastructure, VIT University, Vellore, Voltas, WaterHealth India, Weir Minerals (India), WILO Mather and Platt Pumps, Wipro Enterprises, Xylem Water Solutions, Yokogawa, etc.

AGENDA/STRUCTURE

TRENDS, DEVELOPMENTS AND FUTURE POTENTIAL

- What are the recent trends & developments in the desalination market in India?
- What are the emerging requirements in India? What are the technologies, solutions and best practices?
- What are the new and emerging opportunities? What is the future potential?

PRIVATE PLAYERS' VIEWPOINT

- What is the perspective of private players on the desalination segment?
- What has been the impact of Covid-19 on projects, funding and timelines?
- What are their future plans and outlook for the segment?

MUNICIPAL CAPACITY, UPCOMING PROJECTS AND OPPORTUNITIES

- What is the existing desalination capacity in your state/city? How has been the implementation experience?
- What are your capacity expansion plans over the next two to three years? What are the investment requirements?
- What are the upcoming opportunities in the state/city?

INDUSTRIAL CAPACITY, UPCOMING PROJECTS AND OPPORTUNITIES

- What is the existing desalination capacity? What is the percentage of water requirement being met through desalination?
- What are your capacity expansion plans over the next two to three years? What are the investment requirements?
- What are the upcoming opportunities in the industrial desalination segment?

COSTS, ROI AND ECONOMICS

- What has been the trend in the capex and RoI for desalination plants?
- What are the key cost components? What is the share of land, technology and energy costs in the total plant cost?
- What has been the trend in production and O&M costs? What are the tariffs and charges being levied by ULBs?

ENERGY MANAGEMENT PRACTICES AND NEW SOLUTIONS

- What has been the trend in energy costs vis-à-vis total operational costs?
- What are the current practices with regard to the optimisation of energy costs and requirements?
- What role can renewable energy play in optimising costs? What are some of the initiatives being taken in this space?

TECHNOLOGY FOCUS

- What are the key features of various types of membrane and thermal desalination technologies? What is the current state of deployment?
- What are the new and emerging technologies and advancements (electrodialysis, forward osmosis and membrane distillation)?
- What are the specific issues and challenges? What is the segment outlook?

ROLE OF AUTOMATION

- What is the role of IT and automation systems in the O&M of desalination plants?
- What are the most promising technologies/solutions (PLC, SCADA, AL, ML, etc.)? What are the emerging requirements in light of the Covid-19 pandemic?
- What are the upcoming opportunities and outlook for the segment?

EQUIPMENT SHOWCASE: NEW AND EMERGING REQUIREMENTS

- What are the new and emerging equipment requirements in the desalination segment (membranes, pumps and valves, pipes, filtration systems, etc.)?
- What are the emerging material requirements for desalination plants (steel fibre, cement concrete, etc.)? What are the cost savings that can be achieved through the use of these materials?
- How is the industry gearing up to meet these requirements?

Target Audience

- The event is expected to draw participation from executives, managers and decision-makers from:
  - Thermal power plants
  - Water supply and sewage boards
  - Municipal corporations
  - Desalination plant suppliers
  - Consulting engineers
  - EPC contractors
  - Technology providers
  - Research and development organisations
  - Equipment providers
  - Other manufacturing units: steel, cement, sugar, paper pulp, oil refinery
  - Other consultants and financiers
  - Etc.

WATER MANAGEMENT IN THERMAL POWER PLANTS

Mission

- Thermal power generation is a water-intensive activity and accounts for around 87 per cent of the industrial water consumption. Make-up water for cooling towers accounts for a major portion of the water requirement for a thermal power plant (TPP), followed by ash handling and demineralising water make-up. With the majority of the TPPs adopting wet flue-gas desulphurisation (FGD) systems to comply with the new air emission norms, their water requirement is expected to increase further.
- The majority of coal-based power plants have a water consumption of 5-7 cubic metres per MWh. Power plants with inefficient water consumption practices and older power plants have higher specific water consumption.
- As per the Ministry of Environment, Forest and Climate Change's (MoEFCC) specific water consumption norm, all freshwater-based plants are required to meet the norm of 3.5 or 3 cubic metres per MWh. In addition, freshwater-based closed-loop plants (commissioned post 2016) have to achieve zero liquid discharge. The government has also made it mandatory for all TPPs within 50 km of a sewage treatment plant to use treated wastewater in their operations.
- The new norms have pushed power utilities to adopt efficient water management practices since around 48 per cent (as per industry estimates) of India's power plants are located in water-scarce areas. Power plant developers are adopting real-time monitoring tools (such as SCADA and IoT), zero liquid discharge solutions, and dry cooling and ash water recirculation systems. Besides, efficient water management practices are gaining traction. These include increasing the cycles of concentration of cooling water to reduce blowdown and optimising the ash water ratio.
- **The mission of this one-day virtual conference is to provide a platform to discuss genco experience, plans and future strategies for efficient water management at thermal power plants. The conference will also showcase best practices as well as the latest and promising technology solutions.**

Previous participants

The companies that participated in our previous conferences on "**Water Management in Thermal Power Plants**" include: Advent Envirocare Technology, Alfa Laval, Alfa Laval (India), Andhra Pradesh Paper Mills, Andritz Separation and Pump Technologies India, APGENCO, Aqua Designs India, Arch Protection Chemicals Pvt. Ltd, BASF India, Bhabha Atomic Research Centre, Bharat Heavy Electricals, Black & Veatch, BNP Paribas, Bosch, Center for Fly Ash Research & Management, Central Pollution Control Board, Central Power Research Institute, CESC Limited, CESC Limited, CH2M Hill (India), Damodar Valley Corporation, Danfoss Industries, Deloitte Touche Tohmatsu India LLP, Demech Chemical Products, Desein, Doosan, EEC, Electrosteel Castings, Engineers India Limited, EPTISA India, Ernst and Young, Essar Power Gujarat, Excellence Enhancement Centre (An Initiative of the Indo German Energy Cooperation), FAM Technologies, Feedback Ventures, Fichtner Consulting Engineers, Flowserve Corporation, Forbes Marshall, Frigel Intelligent Cooling Systems India, Frost & Sullivan, GE India Industrial, GE India Industrial, GE Power, GE Power India, GE Power Systems India, GE Water and Process Technologies, GSECL, GSECL Sikka, GSECL Ukai TPS, GSECL Wanakbori Thermal Power Station, GSECL, GTPS Gandhinagar, Gujarat State Electricity Corp., Hatch Consulting, Hitachi India, HMEL, Hydranautics, IBM Global Technology Services, ICF International, ICF INTERNATIONAL, Indian Oil Corporation, International Finance Corporation, IOCL -Panipat, IOCL,Paradip Refinery Project, Ion Exchange, ITC, Jain Irrigation, Jindal Saw, Jindal Stainless (Hisar), Jindal Stainless Coporate Management Services , Jindal Power Limited, JMC Projects, JSW Energy, JUSCO, KPMG, L &T - Sargent & Lundy, L&T, L&T - Sargent & Lundy, L&T-Sargent & Lundy, Larsen & Toubro, Macawber Beekay, McNally Bharat, Ministry of Environment, Forest & Climate Change, MM Aqua Technologies, My Home Power Consultancy Services, Nabha Power, NETRA,NTPC, Netzsch Technologies, Neyveli Lignite Corporation, NTPC, NTPC (Badarpur TPS), NTPC Limited, ONGC, Oorja Energy Engineering Services, Owens Corning, Parker Hannifin India, Parsons, Pee Vee Textiles, PSL, PWC, Qua Water Technologies, Raj West Power, Reliance Energy (Dahanu Thermal Power Station), samvardhana motherson, Scientific Precision, Shah Technical, Skytech Systems, SRK Consulting, STEAG Energy Services (India), Sudarshan Chemical Ind., Sumitomo Corporation India, Tamil Nadu Water Investment Company, Tata Consulting Engineers, Technofab, Teri, Thermax, TMEIC Industrial Systems India, Torishima Pumps (India), Toshiba JSW Power System, Va Tech Wabag, VAG - Valves (India), Vishvaraj Environment, Vizag Steel Plant, Voltas, Watson-Marlow India, Weir Minerals (India), etc.

AGENDA/STRUCTURE

KEY TRENDS AND OUTLOOK

- What have been the key trends in the coal-based power generation segment?
- What has been the trend in water consumption by thermal power plants?
- What are their projected water requirements? What are the issues and concerns?

WATER CONSUMPTION NORMS - PROGRESS SO FAR

- What has been the progress so far in meeting the water consumption standards?
- What has been the trend in specific water consumption at power plants?
- What are the key issues and concerns? What is the future outlook?

UTILITY/DEVELOPER PERSPECTIVE

- What are the current water management practices? What are the new and emerging solutions being explored?
- What has been the progress in meeting water consumption norms?
- What are the biggest issues and concerns? How are they being addressed?
- What are the future plans and key focus areas?

FOCUS ON COOLING SYSTEMS

- What are the water requirements for cooling systems in TPPs?
- What are the new and emerging technologies for optimising the use of water in cooling systems?
- What has been the trend in the uptake of such solutions so far?
- What are the biggest issues and challenges?

TREATED SEWAGE WATER FOR TPP CONSUMPTION

- What has been the trend in the use of treated sewage water at TPPs?
- What are the biggest issues and concerns?
- What is the future outlook?

SPOTLIGHT ON ASH HANDLING SYSTEMS

- What are the water requirements for ash handling systems in TPPs?
- What are the new and emerging technologies for optimising the use of water in ash handling systems?
- What has been the trend in the uptake of such solutions so far?
- What are the biggest issues and challenges?

WATER REQUIREMENTS FOR FGD SYSTEMS

- What are the water requirements of wet FGD systems?
- What are the new and emerging technologies for optimising the use of water in FGD systems?
- What has been the trend in the uptake of such solutions so far?
- What are the biggest issues and challenges?

WASTEWATER TREATMENT AND ACHIEVING ZLD

- What are the current wastewater treatment practices followed by TPPs?
- What are the latest technologies for achieving zero liquid discharge (ZLD)? What has been the uptake of such solutions so far?
- What are the key issues and challenges? What is future outlook?

FOCUS ON DIGITAL TECHNOLOGIES (SCADA, IoT solutions, etc.)

- What are the key digital technologies for water management at TPPs?
- What has been the uptake of such solutions so far?
- What are the issues and concerns in deploying these technologies?

INDUSTRY SHOWCASE AND CASE STUDIES

- What have been the noteworthy projects/initiatives in water management?
- What are the water management-related plans and initiatives?
- What are some of the new technologies and solutions being deployed?

Target Audience

- The event is expected to draw participation from executives, managers and decision-makers from:

  - Thermal power plants
  - Wastewater and effluent treatment companies
  - Power plant O&M providers
  - Water management consultants
  - Water supply and sewage boards
  - Municipal corporations
  - Energy efficiency consultants
  - Consulting engineers
  - Technology providers
  - Equipment providers
  - Policy makers and regulators
  - Other consultants and financiers
  - R&D organisations
  - Etc.

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.
- A **recap** of the conference is also made available to reinforce the key takeaways.

Delegate benefits (Virtual Conference)

- Direct interaction with senior speakers (Q&A facility)
- Easy connectivity to geographically dispersed delegates (click of a mouse)
- Cost effective (lower ticket price as compared to a physical conference)
- Offers flexibility and convenience
- Access to conference recording
- Recap of conference sessions
- Contributes to sustainability and lower carbon footprint

Benefits of sponsorship (Virtual Conference)

- E-Meet influencers and decision-makers/
- Reach out to and engage with new or active prospects
- Generate high quality sales leads
- Increase brand recognition
- Target a captive and engaged audience
- Drive website traffic through social media promotions
- Position your company as the thought-leader in your industry

REGISTRATION FORM

☐ I would like to register for the **"DESALINATION IN INDIA"** conference **(September 14, 2021)**

☐ I would like to register for the **"WATER MANAGEMENT IN THERMAL POWER PLANTS"** conference **(September 15, 2021)**

☐ I would like to register for **both the conferences**

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Sponsorship opportunities are available

Registration Fee

Both conferences

	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

Any one conference

	INR	GST@18%	Total INR	Total USD
1 Login	6,000	1,080	7,080	100
2 - 3 Logins	9,000	1,620	10,620	150
4 - 5 Logins	12,000	2,160	14,160	200
6 - 9 Logins	15,000	2,700	17,700	250
10 - 20 Logins	18,000	3,240	21,240	300

- GST @18 per cent is applicable on the registration fee.
- Registration will be confirmed on receipt of the payment.

Payment Policy:

- Full payment must be received prior to the conference.
- Payments for "early bird" registrations should come in before the last date of discount. Discount offers cannot be combined with any other offer.
- Conference fees cannot be substituted for any other product or service being extended by India Infrastructure Publishing Pvt. Ltd.

Organisers

The conference is being organised by **India Infrastructure Publishing**, a leading provider of information on the infrastructure sectors through magazines, newsletters, reports and conferences. The company publishes **Indian Infrastructure, Smart Utilities** and **Renewable Watch** magazines. It also publishes a series of reports on the infrastructure sectors including **Desalination Market in India and Wastewater Treatment & Reuse Market in India, Sewage Treatment Market in India and Municipal Solid Waste in India, Water in India & Coal-based Power Generation and Captive Power in India.** It also publishes **Urban Water & Sanitation News** (a weekly newsletter).

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