



New Lease of Life for Thermal Power Plants

03 May 2019, Vivanta by Taj – Dwarka, New Delhi



WATER

OPTIMISATION 2019

CONFERENCE & AWARDS

Water usage in power plants has become a critical issue. According to recent government data, over 8,000 MW of thermal capacity was forced to shut down during periods of acute water scarcity in the past couple of years. Moreover, developers are facing increasing difficulty in the selection of new sites for planned projects across states. With water being a key input for several important plant processes such as cooling towers and ash handling systems, there is already a growing realisation amongst power plant operators about the need to reduce specific water consumption through best practices in water efficiency as well as technological efforts.

The government, on its part, has attempted to lower the power sector's water footprint through the tightening of regulations and increasing the water tariffs. The most significant development in this regard has been the notification of new water consumption standards in December 2015. As per the new norms, water consumption by thermal power plants will have to be cut by about one-third their current levels from 2017 onwards. They further require all plants that will be set up after January 2017 to achieve a water consumption level of 2.5 m³ per MWh. For existing cooling tower-based plants, water consumption needs to be restricted to 3.5 m³ per MWh.

At the same time, adopting new water conserving technologies has become a necessity to help mitigate the impact of future water shortages. Several water use reduction technologies are available, each with different benefits and costs. By far, the type of cooling system in a generation plant has the most significant effect on water consumption intensity. In water-restricted regions, air-cooled condensers can offer the most optimal solution.

Ash handling is another key water-intensive process in thermal power plants. Power plant operators are re-evaluating wet ash-handling practices. Dry bottom ash handling techniques, optimisation of ash-water ratios, and use of treated water for ash handling are some of the solutions being considered.

Water Optimisation 2019 - Conference & Awards; is scheduled on 03 May 2019 at Vivanta by Taj – Dwarka, New Delhi, which is expected to attract participants worldwide focusing on policy initiatives, challenges and way forward for thermal plants in our country. A one day conference with 360 degree technical discussions will be packed with multiple networking opportunities among regional and international guests.

Target Audience

Thermal Power Plants

Captive Power Plants

Independent Power Producers

Policymakers and Regulators

Wastewater and Effluent Treatment Companies

Desalination Plant Suppliers

Flyash Disposal Technology Providers

Instrumentation & Monitoring Solution Providers

Power Plant O&M Providers

Other Technology Providers

Equipment Manufacturers

Engineering Consultants

Water Management Consultants

Energy Efficiency Consultants

Certification and Inspection Companies

Pollution Control Boards

R&D Organisations

Etc...

CONFERENCE

Water Optimisation 2019 is intended to provide a forum to meet and discuss the latest water consumption norms issued by the MoEFCC for thermal power plants, key challenges faced by power projects, solutions adopted or available for low water consumption, focus on cooling & ash handling systems, project & technology showcase, waste water treatment and many important aspects and case studies shall be presented during the conference.

AGENDA

09:30	REGISTRATION
10:00-11:00	KEY TRENDS, GUIDELINES AND REGULATIONS <ul style="list-style-type: none">• What has been the trend in water demand by the power sector?• What are the specific water requirements of plants across various processes?• What are the projected water requirements and availability?• What are the key challenges?• What are the new water consumption norms issued by the MoEFCC for thermal power plants? & What is the industry's readiness to adopt them?• What have been the other policy steps undertaken by the central and state governments to promote efficient water utilisation?
11:20-13:00	PLANT OPERATOR EXPERIENCE <ul style="list-style-type: none">• How are power projects being impacted by the declining water availability?• What have been the key challenges?• What have been the key solutions adopted by developers to lower water consumption?• What are the future water strategies being considered?
14:00-16:00	FOCUS ON COOLING & ASH HANDLING SYSTEMS <ul style="list-style-type: none">• What are the water requirements associated with various types of cooling systems (once-through, wet cooling, dry cooling, etc.)?• What are the industry best practices in this regard?• What are the economics associated with the various systems?• How can plants reduce the water requirements for cooling systems?• What are the typical water requirements for fly ash and bottom ash disposal in TPPs?• What are the industry best practices in minimising water usage in ash disposal?• What are the technological solutions available in this regard?
16:30-18:00	PROJECT & TECHNOLOGY SHOWCASE <ul style="list-style-type: none">• What are some of the noteworthy projects with low specific water consumption?• What are their water management strategies?• What has been the capex and opex of the various measures undertaken?• What are the challenges?• What are some of the noteworthy technologies used for efficient water management?• What are the recent global advances? Which of these are the most relevant to India?
18:30-19:30	Water Optimisation AWARD 2019 – The Ceremony
19:30	NETWORKING COCKTAIL

AWARDS

The objective of **Water Optimisation AWARD 2019** recognise outstanding contributions by organisations and individuals involved in formulation of policies and programmes and their implementation, research & development, design, execution, management, smart consumption of water, manufacturing of equipment and capacity building in furthering the thermal power sector of our country.

The **Water Optimisation AWARD 2019** will be presented to utilities and its services sector who demonstrate highest level of commitment and best practice in smart consumption of water at thermal power plants. Over the years the awards will aim to recognize exemplary operations, systems and the evidence of their impact to business vitality. The awards serve as a catalyst to understanding the intrinsic value of business excellence and sustainability.

The Winners of **Water Optimisation AWARD 2019** shall be honoured valedictory session of the conference i.e., **03 May 2019**.

Key Dates

04 MAR 2019
11:00 Hrs | Nomination
Opens

05 APR 2019
17:00 Hrs | Nomination
Closes

03 May 2019
18:30 Hrs | Winners shall
be awarded

Award Categories



Best Water
Efficient Plant
 $\leq 500\text{MW}$



Best Water
Efficient Plant
 $>= 500\text{MW}$



Best Zero
Liquid Discharge
Plant



Best Water
Management in
Ash Handling



Technology
Excellence
- Design
& Engineering



Technology
Excellence
- Technology
Provider



RENOVATION MODERNISATION 2019

CONFERENCE & AWARDS



The renovation & modernisation (R&M) of coal-based thermal power plants (TPPs) is crucial, both from an environmental and an economic perspective. As of February 2018, there are a total of 622 coal-based power plant units in the country, of which 197 have been operating for more than 25 years. Given that a large number of generating units are old and have outlived their designed life, R&M has been recognised as a cost-effective option to restore the rated capacities of these plants. It helps improve generation, minimise inefficiencies and extend the life of the plants. Moreover, R&M is required for minimising emissions from the existing fleet of old TPPs, thus ensuring compliance with environmental norms.



RENOVATION MODERNISATION 2019

CONFERENCE & AWARDS



Policy initiatives

The government initiated the R&M programme for thermal power units in 1984 in order to improve their performance. During 2012-17, the Central Electricity Authority (CEA) identified a total of 135 thermal power units with an aggregate capacity of 29,367 MW for R&M and life extension (LE). However, of these, works for only 37 units totaling 7,202.26 MW were completed during this period. Going forward, R&M and life extension (LE) works for 64 units aggregating 14,705 MW are being considered for the 2017-22 period.

Another key initiative taken by the government has been the replacement of power plants older than 25 years with new supercritical units. According to the CEA's data, around 32,830 MW of capacity had been operating for more than 25 years, as of March 31, 2015. Of this, around 5,860 MW was considered for retirement in a phased manner while 4,800 MW was taken up for R&M. In addition, around 10,180 MW of old units were identified for replacement with supercritical units. Of this, an aggregate capacity of 6,542 MW has already been retired between September 2015 and November 2017.

Challenges and the way forward

The pace of R&M works at coal-based plants has been rather slow. As per a study conducted by the CEA, the actual plant shutdown period for R&M works varies from 13 to 30 months, instead of the scheduled six to eight months. In order to minimise the shutdown period and avoid time and cost overruns, the necessary preparations for material/ equipment procurement need to be made in advance. Further, in order to prevent technical faults during R&M, DPRs should be prepared by consultants on the basis of residual life assessment studies. Moreover, project management guidelines for R&M works should be identified, defined and standardised.

Often, contractors/subcontractors leave their work midway. To address this problem, utilities have made provisions for liquidated damages for delays in the completion of work at the chargeable rate of 0.25 per cent per week of the contract value. The decision to undertake R&M or replacement would depend on techno-economic aspects and may be considered on a case-to-case basis by the concerned power utilities. Despite various roadblocks, R&M and LE offer potential solutions for improving power plant performance in a cost-effective manner. Going forward, clear timelines, adequate financial support and comprehensive analyses can change the way R&M works have been executed so far.

Mission Energy Foundation takes privilege to announce it yet another initiative for the power sector Renovation & Modernisation 2019 - Conference & Awards; is intended to provide a forum to meet and discuss the science and applications to improve generation, minimise inefficiencies and extend the life thermal power plants.

Renovation & Modernisation 2019 is scheduled on 03 May 2019 at Vivanta by Taj – Dwarka, New Delhi, which is expected to attract participants worldwide focusing on policy initiatives, challenges and way forward for thermal plants in our country. A one day conference with 360 degree technical discussions will be packed with multiple networking opportunities among regional and international guests.

To Register Visit <http://environment.missionenergy.org> or Contact Helpline No. 1800 212 5122



CONFERENCE & AWARDS



Renovation & Modernisation 2019 is intended to provide a forum to meet and discuss government initiatives, project management guidelines for R&M, techno-economic viabilities through-out R&M process, potential solutions for improving power plant performance, a way forward to derive clear timelines along with financial support and comprehensive analyses which can change the way R&M works have to be executed by power plants in future.

Regulators & Policy Makers

Senior Executives of Steel, Power, Cement & Mining

Utilities and Power Producers

Industries Bodies and Business Chambers

Research Institutes & Academia

Environmentalists

Technocrats & Consultants

Logistic Companies & Suppliers

Participant Profile

Fly Ash Handling Experts

Fly ash by-product Producers

Construction and Real Estate Companies

Scientists and Faculty

Slag & Slurry Handlers

AGENDA

09:30	REGISTRATION
10:00-11:00	STATUS & PROSPECTS <ul style="list-style-type: none">• Current status & market dynamics for investments• Targets & objective plan• Update on National Electricity Policy on R&M• Objective of National Perspective Plan• Incentives by CEA• Challenges & mitigations ahead
11:20-13:00	EQUIPMENT & CURRENT TECHNOLOGY <ul style="list-style-type: none">• Focus on cost effective technology upgrades• Current status of equipment market• Update on technology for BTG, ESP, CHP, AHP & BoP
14:00-16:00	R&M ACTIVITIES <ul style="list-style-type: none">• Impact of energy efficiency & plant output• Upgrading of capacity• Condition Monitoring & R&M Optimisation through cost benefit evaluations• Development of model specification for RLA & R&M work• Issues attached to R&M activities; developer & service provider perspective• Case Study
16:30-18:00	FINANCING & REGULATIONS <ul style="list-style-type: none">• Investments in terms of budget allocations• Accuracy of estimated costs• Surprises at the execution stage often resulting higher than benchmark cost• Incentives from CEA• Fixation of budget• Need for revised policy guidelines
18:30-19:30	Renovation & Modernisation AWARD 2019 – The Ceremony
19:30	NETWORKING COCKTAIL



RENOVATION MODERNISATION 2019

CONFERENCE & AWARDS



AWARDS

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Award Categories

Excellence in Energy Efficiency

Plant of the Year – R&M

Plant of the Year – LE

Solution Provider of the Year – R&M

Solution Provider of the Year – Design & Engineering

To Register Visit <http://environment.missionenergy.org> or Contact Helpline No. 1800 212 5122

Why SPONSOR?

Our aim is to deliver you an event that exceeds your expectations, thus becoming an integrated part of your annual marketing program.

Sponsoring this **Water Optimisation and Renovation & Modernisation 2019** will make your company stand out as a leader in this burgeoning industry and will leave a strong impression of your brand in key decision makers minds. Sponsors have an incredible amount of presence and it will not only give your company optimum exposure but also the opportunity for delegates to meet you and your executives to find out more about your role and business opportunities in the sector.

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- Obtain **DIRECT ACCESS** to potential clients during and after with our meticulously prepared confidential delegate list
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- **NETWORKING** with the industries leading Government Officials, Senior Level Delegates and Experts
- Achieve **GREATER EXPOSURE** and **BRAND BUILDING** through our partners and much more

For Details Contact:

Sponsor Now!

Shri. S Dalvi, President Partnerships & Legal Counsel
dalvi@missionenergy.org
+919769310944

PRINCIPAL SPONSOR

INR 645000 / USD 9950

7 Delegate Passes
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Logo on Conference Backdrop
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Speaking Opportunity - Day 1
Panel Discussion Moderator

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Logo on Conference Website (Hyperlinked)
Corporate Banner in Networking Area (6X3 Ft.)
Merchandise Distribution to attendees
Screening of Company Film
Circulation of Company Literature
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Panel Discussion Panelist

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Circulation of Company Literature
Announcements - Thanking Sponsors
Panel Discussion Panelist

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Circulation of Company Literature
Announcements - Thanking Sponsors

ASSOCIATE SPONSOR

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I would like to attend



Delegate Registration Form

Delegate Fee

- Indian Delegate: INR 12500 Per Delegate + 18% GST**
 Overseas Delegate: USD 350 Per Delegate

DELEGATE DETAILS

Company: _____

Address: _____

City: _____ Pincode: _____ State: _____

Kindly Provide Your Organisation **GSTIN:** _____

Delegate Nomination Filled By: (Liason Officer for Co-ordinates)

Name: _____ Job Title: _____

Tel: _____ Mobile: _____ Fax: _____

Email: _____ Alt Email: _____

Conference Attendee Details

Delegate (1): _____ Job Title: _____

Tel: _____ Mobile: _____ Fax: _____

Email: _____ Alt Email: _____

Delegate (2): _____ Job Title: _____

Tel: _____ Mobile: _____ Fax: _____

Email: _____ Alt Email: _____

Delegate (3): _____ Job Title: _____

Tel: _____ Mobile: _____ Fax: _____

Email: _____ Alt Email: _____

(For more than 3 delegates kindly make copies of the registration form)

Payment Terms

Payment is required within 10 working days on receipt of invoice. If a booking is received 10 working days before the conference a credit card number will be taken to confirm your place, likewise if full payment has not been received before the conference date.

NOTE:

- Kindly fill the registration form completely
- Kindly provide with a valid email id for correspondence
- A confirmation of the registration will be sent via email after receipt of the payment
- No refund will be made in case of no-show / no-attendance
- Registration fee is exclusive of service tax as applicable
- Registration fee include lunch, refreshment and conference document/material at the venue.
- It does not include cost of accommodation and travel

Cancellation Policy:

Should a delegate be unable to attend, a substitute delegate from the company is always welcome at no extra charge. Alternatively, for any cancellations, the following rules shall apply

- 70% refund of registration fee if cancellation is done on or before 20 working days of the schedule
- 50% refund of registration fee if cancellation is done on or before 15 working days of the schedule
- Thereafter, no refunds can be made

Important note:

Please quote the name of the participant and event title on the advice when remitting payment. Bank charges to be deducted from the participation organisation's own accounts. Attendance will only be permitted upon receipt of full payment. It may be necessary for reasons beyond the control of the organiser to alter the content or the event date or location or the identity of the speaker/s.

Way to Register

Helpline: 1800 212 5122

Post: 003, B-16, Sector 1
Shanti Nagar, Mira Road (East)
Thane, Maharashtra – 401107

Online: <http://environment.missionenergy.org>

Email: help@missionenergy.org

Group Discount

Mission Energy Foundation recognises the value of learning in terms. Group bookings at the same time from the same company receive discount:

>3 Delegates	5%
>7 Delegates	10%

This offer is exclusive of the early bird discount. Call us for a special discount rate for terms of 10 and above (Not applicable to clinic(s) only bookings).

Payment Methods

By Check/Bank Draft :

All instruments to in favor of
"Mission Energy Foundation" (payable at Mumbai)
and sent to, Mission Energy Foundation
003, B-16, Sector 1, Shanti Nagar, Mira Road (East)
Thane, Maharashtra 401107 | Helpline: 1800 212 5122

Organisation Details :

Organisation: Mission Energy Foundation
CIN: U74120MH2012NPL233716
PAN: AAICM0818M
Service Tax: AAICM0818MSD002
GSTIN: 27AAICM0818M1Z7

By Direct Transfer :

Bank Name: Kotak Mahindra Bank
Account Name: Mission Energy Foundation
Account Number: 0111221660
Account Type: Current Account
Branch Name: Mira Road (East)
Branch Address: E-Wing, Latif Park,
Mira Bhayandar Road,
Mira Road (E), Thane - 401107
Branch Telephone: +91 22 28120740 / 48 / 49
MIRC Code: 400485051
IFSC / RTGS: KKBK0000649
SWIFT Code: KKBKINBB

All bank charges to be borne by payer. Please ensure that our bank receives the full invoiced amount.

Venue

Dwarka, NewDelhi



VIVANTA

HOTELS & RESORTS

BY TAJ

We apply for below category of Award



AWARD Nomination Form

Award Nomination Fee

- Indian Company: INR 26500 + 18% GST
 - Overseas Company: USD 750
- (per Nomination per Selected Category)

Company : _____

Address : _____

City: _____ Pincode: _____ State: _____

Kindly Provide Your Organisation GSTIN: _____

Award Nomination Filled By: (Liason Officer for Technical / Other Co-ordinates)

Name: _____ Job Title: _____

Tel: _____ Mobile: _____ Fax: _____

Email: _____ Alt Email: _____

Conference Attendee Details (Complimentary)

Name: _____ Job Title: _____

Tel: _____ Mobile: _____ Fax: _____

Email: _____ Alt Email: _____

Water Optimisation AWARD 2019

We apply for below category of Award:

- Best Water Efficient Plant <=500MW
- Best Water Efficient Plant >=500MW
- Best Zero Liquid Discharge Plant
- Best Water Management in Ash Handling
- Technology Excellence – Design & Engineering
- Technology Excellence – Technology Provider

R&M AWARD 2019

We apply for below category of Award:

- Excellence in Energy Efficiency
- Plant of the Year - R&M
- Plant of the Year – LE
- Solution Provider of the Year – R&M
- Solution Provider of the Year – Design & Engineering

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Dwarka, New Delhi



Organiser



Mission Energy
FOUNDATION
(A Not-for-Profit Organisation)



Mission Energy Foundation is a persistent, private, **not-for-profit** endeavour based in Mumbai, India.

We are a micro-enterprise initiative that strives to spread knowledge in the globalising energy sector. We educate and spread technology awareness through ongoing contacts and discussions with the public and industry concerning what the future of the growing energy sector should be.

The beginning: A single man army with its mission to build platforms of discussion, exchange knowledge among industry professionals on core issues pertaining to growing energy sector.

Today: A human asset working together as one endeavour that expertise in organising and delivering successful international summits involving who's who from Entrepreneurs to Academicians to Government Authorities to Technology Providers to Consultants to Industry Professionals from the growing energy sector globally.