

## TECHNICAL SESSION PLAN - INTERNATIONAL O&M CONFERENCE - IPS - 2017

### Theme – Integration of Renewable Power in the Grid...Path Ahead

13<sup>TH</sup> FEB'17 MANEKSHAW CENTRE – NEW DELHI.

<b>Venue</b>	<b>Zorawar Hall</b>	
<b>9:30 – 11:30</b>	<b>Inauguration of O&amp;M Conference</b>	
<b>1130-12:00</b>	<b>High Tea</b>	
1200-1330	<b>Session- 1</b> <b>Integration of Renewable Power in the Grid</b> 1. Plan for integration of 175 GW RE capacity in the Indian Grid – <b>CEA</b> 2. Growth of Renewable energy in India - <b>MNRE</b> 3. NTPC Renewable Plan - <b>NTPC RE</b> 4. Integrating renewable power in the Grid – <b>NTPC Engg</b>	
<b>1330 -1415 hrs.</b>		<b>Lunch</b>
	<b>Zorawar Hall</b>	<b>Ashoka Hall</b>
1415-1545	<b>Session -2A</b> <b>Flexible Operation</b> 1. Power Fluctuation Control through Coal Fired Power Station – <b>JCOAL, Japan</b> 2. Adding operational flexibility to a coal fired plant – <b>Siemens AG, Germany</b> 3. Conduct of Operations – <b>EPRI, USA</b> 4. Solutions for Flexible Operation of Power Plants – <b>Steag, Germany</b> 5. Influence of Renewable Energy in Plant Safety and Challenges – <b>KSB Services, Germany</b>	<b>Session-2B</b> <b>Solar Generation</b> 1. Developing an insolation rate to compare the operating performance of PV plants - <b>Ananthapuramu</b> 2. O&M asset management of solar photovoltaic plant - <b>Adani Green Energy</b> 3. Algorithm to harvest maximum solar energy – <b>ERDA</b> 4. Learning from experience – imperatives of NTPC in solar energy – <b>Jhajjar</b> 5. Operational issues and performance improvement of solar plant - <b>Unchahar</b>
<b>1545 – 1600 hrs.</b>		<b>Tea</b>
1600-1730	<b>Session -3A</b> <b>Environment Protection Initiatives</b> 1. AQCS Experience for Indian Power Plants – <b>MHPS, Japan</b> 2. SNCR Technology for Large Combustion Plants – <b>ERC Technik, Germany</b> 3. SCR retrofit for NOx reduction control – <b>Yara, Austria</b> 4. A case study on integrated approach towards environmental sustainability of critically polluted zone - <b>Vindhyachal</b> 5. NTPC initiatives for environmental protection - <b>Engg</b>	<b>Session-3B -</b> <b>Hydro Plants</b> 1. Renovation, modernization, uprating & life extension of hydro plants in India – <b>CEA</b> 2. Health assessment & surveillance of large civil structures of hydroelectric project – <b>THDC India</b> 3. Restoration of hydro generators in a flooded underground power house - <b>NHPC Parbati</b> 4. Commissioning challenges and operation practices in Koldam - <b>Koldam</b> 5. Renovation, modernization & uprating of hydro power units – <b>BBMB, Bhakra</b>

Inauguration of Exhibition “Techno Galaxy- 2017” at PMI on 14.02.2017 at 09.30 AM by **CMD, NTPC Ltd.**

Inauguration of Exhibition “Techno Galaxy- 2017” at 09.30 AM by CMD, NTPC Ltd.

Venue	Saraswati Auditorium	Nalanda Hall	Aurobindo Hall
0945-1115	<p><b>Session – 4A</b> <b>Flexible Operation</b></p> <ol style="list-style-type: none"> <li>1. Cost of cycling fossil power plants -<b>Intertek, USA</b></li> <li>2. Flexible and Dynamic large coal power plants in a volatile grid - <b>Siemens, Germany</b></li> <li>3. Changing role of Central Generating Stations in Indian Power Sector - <b>CEA</b></li> <li>4. Efficient Operation of Units at Part Load – An Operation Challenge - <b>Ramagundam</b></li> <li>5. Part load cyclic operation “A challenge for thermal power plant” - <b>Unchahar</b></li> <li>6. Flexible operation - NTPC approach - <b>NTPC COS</b></li> </ol>	<p><b>Session – 4B</b> <b>Control &amp; Instrumentation</b></p> <ol style="list-style-type: none"> <li>1. New Technologies &amp; Best Practices of Reliance - <b>Reliance DTPS</b></li> <li>2. C&amp;I system diagnostics with self monitoring and reporting technology - <b>Ramagundam</b></li> <li>3. Achieving Unified HMI through DCS Interoperability - <b>PE - C&amp;I</b></li> <li>4. Root cause analysis with cause effective charting, customized software - <b>Rihand</b></li> <li>5. Optimizing renovation and modernization of control systems – shaping the future - <b>NTPC COS</b></li> <li>6. Renovation of turbine governing system - <b>NSPCL Durgapur</b></li> </ol>	<p><b>Session – 4C</b> <b>Safety</b></p> <ol style="list-style-type: none"> <li>1. Plant Safety Control - <b>JCOAL</b></li> <li>2. Modern systems for health and safety management – a way to zero accident - <b>ONGC Tripura</b></li> <li>3. Integrating Safety in Operation, enhancing Operational Performance - <b>Dupont</b></li> <li>4. Electrical flashover hazards and safety measures reference to design and maintenance - <b>Ramagundam</b></li> <li>5. Safety initiatives in NTPC - <b>Corp Safety</b></li> <li>6. Industry Solutions towards Cyber Security of Modern Switchyards/Grid and Distribution Systems - <b>Korba</b></li> <li>7. Robust Safety Management System to Enhance Customer Satisfaction - <b>DLF</b></li> </ol>
<b>1115 -1130 hrs. Tea</b>			
1130-1300	<p><b>Session – 5A</b> <b>Energy Efficiency</b></p> <ol style="list-style-type: none"> <li>1. Benchmarking to accelerate Energy Efficiency in Thermal Power Plants - <b>CII</b></li> <li>2. Optimization of Station NHR at Part Load - <b>NLC India</b></li> <li>3. Design Modification in improving Cooling Tower Performance - <b>JSW Energy Ltd.</b></li> <li>4. Efficiency Initiative for marginal contribution maximization - <b>CenPEEP</b></li> <li>5. Online APC monitoring and Guidance software - <b>Vindhyachal</b></li> <li>6. Energy loss due to improper functioning of steam traps in Auxiliary steam pipe lines - <b>Vallur</b></li> </ol>	<p><b>Session – 5B</b> <b>Gas Turbine and auxiliaries</b></p> <ol style="list-style-type: none"> <li>1. Renovation &amp; Modernization in Auraiya Gas Power Station - <b>MHPS, Japan</b></li> <li>2. Gas Turbine uprate solutions - <b>BGGTS</b></li> <li>3. Strategies for Gas station operation - <b>COS GT</b></li> <li>4. A case study of Blade Health Monitoring in 9FA gas turbine compressor blades at RGPPL and BHM of wind turbines - <b>RGPPL</b></li> <li>5. Reducing plant start-up time - <b>Anta</b></li> <li>6. Best Practices for grid management &amp; improvement in reliability - <b>Kawas</b></li> </ol>	<p><b>Session – 5C</b> <b>Steam Turbine and auxiliaries</b></p> <ol style="list-style-type: none"> <li>1. Reduction in cooling time of turbine - <b>GMR Energy</b></li> <li>2. Reliability of the LP blading and learnings from Rihand Unit 6 Incident investigations - <b>COS ST</b></li> <li>3. Redesigning bottom CONSEP assembly of ARU vessel of CPU - <b>Farakka</b></li> <li>4. Use of ventilation system during alumina cleaning of turbine components - <b>Dadri Coal</b></li> <li>5. HP Turbine breech nut replacement - <b>Jhajjar</b></li> <li>6. Improving cycle efficiency of thermal power plants by enhancing vacuum pump capacity - <b>Unchahar</b></li> </ol>

1300 -1400 hrs.		Lunch	
1400-1530	<p><b>Session – 6A</b> <b>Asset and outage Management</b></p> <ol style="list-style-type: none"> <li>Developing an Equipment Reliability Program Model – <b>EPRI, USA</b></li> <li>IOT – the enabler for asset health management – <b>Antarriksh, USA</b></li> <li>Best Practice for Asset Management – <b>Bentley Systems, Canada</b></li> <li>Asset Management : Aging assets and balancing risk – <b>Black &amp; Veatch</b></li> <li>Achieving Excellence through asset management and risk analysis – <b>OPGC, India</b></li> </ol>	<p><b>Session – 6B</b> <b>Environmental Aspects and Water Management</b></p> <ol style="list-style-type: none"> <li>Low cost option for meeting air pollution norms – <b>Chemtura, UK</b></li> <li>Assessment and Inventorisation of Mercury Emission from Coal fired Power Plants in view of Minimata Convention and New Emission Norms in India – <b>Ramagundam</b></li> <li>FGD Commissioning &amp; Operation "A New Beginning in NTPC" – <b>Vindhyachal</b></li> <li>Environmental aspect of Koldam – <b>Koldam</b></li> <li>Water balance and water conservation in thermal power stations – <b>Siri Exergy</b></li> <li>Challenges in O&amp;M due to new environmental norms and renewable capacity addition – <b>Uniper Power Services</b></li> </ol>	<p><b>Session – 6C</b> <b>Electrical systems</b></p> <ol style="list-style-type: none"> <li>Electric Motor Monitoring &amp; Diagnostics with Advanced Protection Relays <b>GE Grid Solutions</b></li> <li>Isolated phase bus bar connection between generator and generator transformer bank <b>PE – Elect.</b></li> <li>A case study of partial discharge and electrical tracking in a 11kV metal clad switchgear – <b>Singrauli</b></li> <li>Unique approach for sustainability – <b>Bongaigaon</b></li> <li>Learning by failures – a transformer case study, a quality perspective – <b>RIO Bhopal</b></li> </ol>
1530 – 1600 hrs.		Tea	
1600 -1730	<p><b>Session – 7A</b> <b>Academics for Power Generation</b></p> <ol style="list-style-type: none"> <li>Temperature dependency of partial discharge acoustic signal in transformer oil – <b>IIT Kharagpur</b></li> <li>A numerical study of nano-fluid based direct absorption solar collector performance – <b>Jadavpur University</b></li> <li>Modelling pipeline blockage condition for pneumatic conveying of fly ash – <b>Thapar University</b></li> <li>Smart energy metering and theft detection with IoT technology – <b>KIET, Ghaziabad</b></li> <li>Strategic issues and techniques to optimize water consumption in thermal power plants – <b>Pandit Deendayal Petroleum University</b></li> <li>Removal of Fluoride from Drinking Water by Electro-coagulation – <b>IIT Dhanbad</b></li> <li>Effect of chemical properties of coal on its combustion behavior – <b>IIT Dhanbad</b></li> </ol>	<p><b>Session – 7B</b> <b>Renewable Integration</b></p> <ol style="list-style-type: none"> <li>Renewable Energy Integration-Challenges for Conventional Power Plants – <b>GSECL</b></li> <li>Flexible and part load operation &amp; strategies of coal based units w.r.t growing renewable power – <b>Sipat</b></li> <li>Low temperature solar thermal power generation based on Kalina cycle – <b>Unchahar</b></li> <li>Multiphysics Simulation of Solar PV modules – <b>Faridabad</b></li> <li>SOLAR PRDS : A concept of hybridization of solar power with thermal power – <b>Sipat</b></li> <li>Integrating renewable and grid management – <b>Kahalgaoon</b></li> <li>Transforming renewable operation through IOT – <b>Altizon, India</b></li> </ol>	<p><b>Session – 7C</b> <b>Chemistry Management</b></p> <ol style="list-style-type: none"> <li>Improved Corrosion monitoring &amp; resin regeneration and replacement – <b>Mettler Toledo, USA</b></li> <li>Best practices in the performance of membrane system in water treatment – <b>NALCO Water</b></li> <li>STP (MBR Based) &amp; RO system At NTPC-Badarpur – <b>Badarpur</b></li> <li>Corrosion management of water transport pipes of power plants – <b>Corrosion Consultants</b></li> <li>Utilisation of wastes for power– “An attempt to make NTPC plant a zero wastes discharge station” – <b>NETRA</b></li> <li>Cost effective green solution for zero discharge for gas power stations – <b>Auraiya</b></li> </ol>

Exhibition and presentation by the participant of “Techno Galaxy - 2017” on 15.02.16 from 9:30 – 13:00 hrs at Saraswati Auditorium and Nalanda Hall.

15<sup>TH</sup> FEB'17 PMI NOIDA

Exhibition and presentation by the participant of “Techno Galaxy - 2017” from 9:30 – 13:00 hrs at Saraswati Auditorium and Nalanda Hall.

Venue	Saraswati Auditorium	Nalanda Hall	Aurobinbo Hall
9:30 – 11:00	presentation by the participant of “Techno Galaxy”	presentation by the participant of “Techno Galaxy”	<p><b>Session – 8C</b></p> <p><b>Structure</b></p> <ol style="list-style-type: none"> <li>1. Repair, restoration &amp; retrofitting of in service concrete structures in power plant - <b>NCCBM</b></li> <li>2. Structural analysis, condition assessment and rehabilitation of high rise structures - <b>NLC India</b></li> <li>3. Structure Inspection using UAVs - <b>Korba</b></li> <li>4. Condition assessment of rcc structures at Badarpur - <b>Badarpur</b></li> <li>5. Cooling water channel repair work at Singrauli - <b>Singrauli</b></li> <li>6. Koldam spillway gate failure - <b>NETRA</b></li> </ol>
11:30 – 13:00	presentation by the participant of “Techno Galaxy”	presentation by the participant of “Techno Galaxy”	<p><b>Session – 9C</b></p> <p><b>Operational Issues of Coal Stations</b></p> <ol style="list-style-type: none"> <li>1. Strategies for Optimization of coal cost for reduction of ECR and maximizing generation - <b>NTPC FM</b></li> <li>2. Combating the corrosion - SS lining in MGR wagons - <b>Ramagundam</b></li> <li>3. Safer coal sampling system - <b>Korba</b></li> <li>4. Mine Back Filling with Ash Slurry at TTPS-Key Challenges - <b>TTPS</b></li> <li>5. Experience &amp; learning from super critical power units at Mouda 660 MW units - <b>Mouda</b></li> </ol>

1300 – 1400 hrs.

Lunch

Venue	Saraswati Auditorium	Nalanda Hall	Aurobinbo Hall
1400-1530	<p><b>Session – 10 A</b> <b>Boiler &amp; Auxiliaries</b></p> <ol style="list-style-type: none"> <li>Lubrication standards guiding manual – <b>EPRI, USA</b></li> <li>A case study on boiler tube failure – <b>JPL</b></li> <li>Life management of high temperature SH &amp; RH tubes in boiler - <b>NTPC COS</b></li> <li>Boiler performance improvement by retrofitting of boiler - <b>Kaniha</b></li> <li>Managing start-ups &amp; exfoliation of super critical boiler – <b>Tata Power</b></li> </ol>	<p><b>Session–10 B</b> <b>Ash Management and Utilization</b></p> <ol style="list-style-type: none"> <li>High volume utilization of coal combustion by products for new and failing pavement – <b>OSU, USA</b></li> <li>Eco friendly usage of solid waste – <b>FLSmith</b></li> <li>Transportation methodology of coal ash from power stations to an abandoned coal mine site – <b>TERI</b></li> <li>Sustainable Evacuation of Dry Fly Ash at IGSTPP – A Unique Experience - <b>Jhajjar</b></li> <li>Butteressing of ash dyke lagoon V-1 at Vindhyachal - <b>Vindhyachal</b></li> </ol>	<p><b>Session – 10 C</b> <b>Commercial &amp; Operation</b></p> <ol style="list-style-type: none"> <li>Sasan O&amp;M best practices - <b>Sasan Power Ltd.</b></li> <li>Start up cost - Evaluation - <b>COS</b></li> <li>Integration of renewable energy into fossil fuels - an overview - <b>Sipat</b></li> <li>Powering ahead with renewables in cost effective way, NTPC prospective - <b>RIO Pune</b></li> <li>Frequency Forecasting using Time Series ARIMA model - <b>NSPCL Bhilai</b></li> <li>A Journey to Raise the Bar of Operational Excellence at UMPP Mundra - <b>Tata Power</b></li> </ol>
<b>1530 – 1600 hrs.</b>	<b>Tea</b>		
<b>1700 hrs Onwards</b>	<b>Internal Review meeting at Saraswati Auditorium</b>		