



Information Brochure
CALL FOR PAPERS

CIGRE- AORC TECHNICAL MEETING 2016

(CIGRE- Asia Oceana Regional Council (AORC) Technical Meeting 2016)

INTERNATIONAL CONFERENCE

GLOBAL TRENDS IN THE DEVELOPMENT OF POWER TRANSMISSION & DISTRIBUTION SYSTEMS INCLUDING SMART GRID

Dates : 24th to 26th February, 2016
Technical Meeting cum Intl. Conference

27th February 2016

**Field Visit and trip to Agra (Taj Mahal) for CIGRE-AORC Members,
International Participants and their companion**

**Venue : Hotel VIVANTHA by Taj, Sector 21, Metro Station Complex,
Dwarka, New Delhi -110075, India**

Organized by



CIGRE - India



Central Board of Irrigation & Power

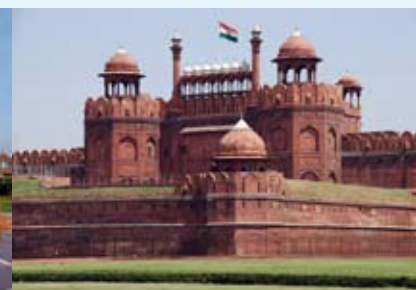
Technical Partners



Afro Asian Region Organization



Society of Power Engineers



INTRODUCTION

CIGRE-AORC (Asia Oceana Regional Council) - Technical Meeting is a forum for sharing experience and knowledge regarding pertinent technical issues particularly those affecting power systems in the Asia-Oceania region.

The countries from Asia Oceana region associated with CIGRE - AORC forum are : **Australia; China; Cambodia; Gulf Cooperative Council; Hong Kong; India; Indonesia; Iran; Jordan; Japan; Korea; Malaysia; New Zealand; Taiwan; Thailand, etc.**

TOPICS FOR DISCUSSION

The following technical subjects have been identified for discussion during AORC-CIGRE Technical Meeting 2016 in India on “Global Trends in the Development of Power Transmission & Distribution Systems including Smart Grid”

- Overhead Transmission Lines
- Substations
- Transformers
- EHV Cables
- Distribution System
- Smart Grid Technologies

Over Head Transmission Lines

- New Trends in planning & Design
- Control of transmission line capacitances in the design.
- Environmental friendly transmission towers
- Application of L-L & L-G surge arresters
- Geospatial Workflows in Transmission ROW
- New Material including New Conductors and Installation
- Latest Maintenance Procedures of EHV Transmission Lines
- Reliability Centered Maintenance (RCM)
- Condition Monitoring of EHV Transmission Lines
- Counter Measures for Pollution including Lightning Mapping Studies.
- Helicopter Maintenance Techniques
- Composite/Polymer Insulators particularly UHV/ AC & DC Systems
- Hotline Maintenance
- Application of stainless steel hardware in transmission line towers in teft prone areas
- Maintenance through Robotics technologies
- Use of Unmanned Aerial Vehicles (UAVs) for Transmission Lines
- Latest Development in HVDC Systems including + 800 kV HVDC
- Use of HVDC – VSC based Transmission
- Geographic Information System (GIS) for Use on Transmission Lines
- Latest Development of UHV Lines including 1200 kV System
- Compact Transmission Lines using FRP Supports
- Advance Sensors for Overhead Lines Inspection
- FACTS Devices for Transmission
- Gas Insulated Transmission Lines
- Safety Aspects with Respect to Transmission Lines
- Asset Management
- Other related topics
- Optimization of transmission line lengths vis-a-vis transmission voltages

The chosen theme for AORC-CIGRE Technical Meeting 2016 in India is “**Global Trends in the Development of Power Transmission & Distribution Systems including Smart Grid**”

DATE & VENUE

The dates for the conference are 24th to 26th February, 2016 and the venue is Hotel VIVANTHA by Taj, Sector 21, Metro Station Complex, Dwarka, New Delhi -110075, India. A field visit/trip to Taj Mahal (Agra) will be organised for CIGRE-AORC Member and International Participants and their companion on 27th February 2016.

The emerging technologies on these topics will cover the following aspects:

- Planning & Design
- Equipment development / manufacturing
- Erection & Testing Techniques
- Operation & Maintenance
- Materials

The sub-topics on these technical subjects are given below:

SUB-TOPICS FOR DISCUSSION

Sub Station

- Advancement and Innovations in Substation Equipments
- Advancement of Use of Optical Fibers and SF6 CTs and CVTs in Substations
- Development of Un-manned Substations
- Development in 1200 kV AC & 765 kV AC Class Equipment including Circuit Breakers etc.
- Development of Digital Substations
- Design & Development of Seismic Resistant Substation
- GIS and its Experience
- Process Bus Technology
- FACTS Devices
- High Speed Grounding Switches for HVDC System
- Integration of STATCOM Controls into HVDC Controls and automatic changeover in case of tripping of HVDC Transmission in order to maintain system stability.
- Technical solution to control electrode line theft in power balance mode of operation of a bi-pole.
- Experiences and Benefits with Substation Automation and Protection Schemes Based on IEC 61850
- SCADA & Automation
- Modern Condition Monitoring Techniques used in Substations
- Hybrid based Solution for Renovation & Modernization of Substations
- Hybrid/Mixed Technology Switchgear (MTS)
- Forced Outages due to Failure of Substation Equipment – Corrective Actions
- Emergency Restoration System for Substation
- Various Case studies on the subject.
- Other related topics

Transformers

- Specification, design, material, manufacturing and testing requirements and facilities.
- Transportation constraints, installation and commissioning.
- Operation and maintenance of transformers for strategic management.

- Management of monitoring systems to ensure effective utilization of data.
- Advances in transformer diagnostic and online monitoring
- Special monitoring & Maintenance of Accessories - especially bushings and OLTC-Monitoring and Control
- Application of tap changer and tap changer windings in separate tank/tanks
- Geomagnetic induced current and effects on Power Transformers
- How to improve the reliability of HVDC Converter transformers at par with Inter-connecting transformers (ICTs)
- How to improve reliability of Generator transformers at par with ICTs.
- Improved specifications of the power /converter Transformer Oils
- Criteria for Numbers and Location of temperature sensors
- Why not use stainless steel tanks for power transformers
- Pressure relief vent in the power transformer bushings
- Application of fibre glass rod inside the aluminium / copper tube of the bushing for getting an isolation between rod and the connecting lead of the bushing
- Residual life assessment and life extension techniques
- Shunt reactors and their vibrations mitigation techniques.
- Improved core assembly technologies for power transformers and shunt reactors
- Gas filled Transformers
- Application of L-L & L-G surge arresters on un-loaded tertiary windings of power transformers
- Vacuum type on load tap changer
- Elimination of tap changers in power transformers where frequent use not required
- Alternatives to mineral based transformer oils.
- Application of vegetable oils, its pros & cons.
- Studies of solid & liquid insulation
- Development of CRGO Silicon Steel and its manufacturing technologies.
- Other related topics

EHV Cables

- Newly installed or up graded cable systems
- Design, installation, operation and techniques to improve safety from induced voltages and currents
- Advances in testing and relevant experience
- Lessons learnt from permitting, consent and implementation of mitigation measures
- Best use of existing cable systems
- Condition assessment, diagnostic testing and monitoring of cable systems and accessories
- Upgrading methodologies and related experience
- Trends in maintenance strategies, remaining life assessment and asset management
- Insulated cables in the Power System of the Future
- New functionalities, innovative cable designs, accessories and systems
- New technologies for EHV / UHV cable terminations
- Application of cable capacitances for reactive power generation & control
- Advances in modeling
- Environmental challenges for future cable systems
- Longer lengths and higher voltage levels for AC and DC Cables
- Submarines cables for Power Transmission
- Other related topics

Distribution System

- Reactive Power Controls – Using STATCOM in Distribution Sector.
- Stability of Grid Distributed Generation, integration in Distribution Grid/ customer
- Best Practices for Operation & Maintenance of Distribution System
- Regulations and Tariff management in Distribution Sector
- Reduction in Distribution / AT&C Losses including theft of power
- Application, limitations and impact of HVDS on human behaviour
- Control of rate of failures of distribution transformers there by spare transformer inventory controls
- Technology Development in Distribution Transformers and distribution lines / Aerial bunched conductors.
- Latest Construction practices in Distribution System
- Latest Controls & Protection for Distribution sector
- SCADA and Automation in Distribution Sector
- Communication Systems for Distribution Network
- Carriage & Content separation
- Underground Distribution Systems
- Demand side management, demand response and Integration of solar driven irrigation pumps etc.
- Energy Efficiency in Distribution Sector
- Energy Storage in Distribution Sector
- Power Quality Management
- Peak Power Management
- Control of pilfrages and accuracies in energy meters
- Current Trends in Manufacturing & Quality Assurance including Use of Transformer Oil
- Innovation in Distribution System – Amorphous Core Distribution Transformer & Cast Resin Dry Type Transformers etc.
- Other related topics

Smart Grid Technologies

- Smart Grid in Transmission & Distribution System
- Smart Grid in Transmission; Wide Area Monitoring and Protection Systems
- Use of GIS in Distribution
- Use of UAV in Distribution
- Smart Grid in Distribution State-of-the-art Meters and Metering System, Demand Side Integration, Cyber Security for Distribution Systems
- Energy Storage Integration with Distribution Operations – Examination of Issues and Approaches for Different Storage Locations (Substation, Distributed, Customer)
- Smart Inverter Integration with Distribution Operations for Both PV and Storage
- Advanced Metering Business Cases for Distribution Operations
- Pilot Projects and Case Studies
- Other related topics

Cross Border Electricity Trading

During AORC Technical Meeting 2016, There will be half day technical session on ‘Cross Border Electricity Trade’ with a view to discuss the problems related to the power sector trading between various countries in South Asia Region including Interconnection of the South Asia Regions using HVDC Back to Back Schemes and trading strategies, with a Panel discussion. The valuable views on the various issues will be highlighted by the prominent speakers.

PROGRAMME

The schedule for various activities during the above event is as below:

Sl. No.	Date	Activities	Parallel
1	Day 1 24th Feb. 2016 (Wed.) 0900 - 1730 hrs.	International Conference - Session on Global Trends in Development of Power Distribution System including Smart Grid	CIGRE AORC Panel Meeting
2	Day 2 25th Feb. 2016 (Thu.) 0900 - 1730 hrs.	International Conference - Session on Global Trends in the Development of Power Transmission System including Smart Grid	CIGRE AORC Panel Meeting
3	Day 3 26th Feb. 2016 (Friday) 0900 - 1730 hrs.	Forenoon Session contd. On "Global Trends in the Development of Power Transmission System including Smart Grid"	CIGRE- AORC Administrative Meeting
		Afternoon Session Panel Discussion on Cross Border Electricity trade	
4	27th Feb. 2016 (Sat.) 0700 – 2000 hrs.	Field visit and trip to Agra (Taj Mahal) for AORC Members International Participants and their companion only	

Participants

This forum is open for everyone involved in the power industry, e.g., power utilities regulators, manufactures, independent power producers, contractors, consultants, academicians etc.

SUBMISSION OF SYNOPSIS & PAPERS

The synopsis on the above topic are invited. Participants who intend to present papers are invited to submit their abstracts in English via email to cbip@cbip.org with a minimum 500 words indicating name, title, company affiliation, E-mail address, and full address of the authors.



Successful papers selected/to be presented in the International Conference will be notified by 25th December. 2015 and presenters are expected to submit full paper and presentation files in MS words, and MS PowerPoint format by the given dateline

Datelines:

- Date line for synopsis submission – 10th December, 2015
- Date for notification of acceptance after necessary screening – 25th December, 2015
- Date for submission of full paper – 10th January, 2016
- Date line for Presentation submission – 31st January, 2016

REGISTRATION

Those willing to participate and present Papers in the technical conference have to register for this event by filling up the Registration Form and e-mail back to us by the stipulated dateline. Registration is only complete once the payment is fully made. Discounts are offered for early registration. Please refer to attached form for event registration and booking of accommodation.

REGISTRATION FEE

The registration fee payable by the delegates, including authors of papers, for participation in the conference is as follows:

Sl. No.	Event	Fee payable by				
		SAARC countries in INR			Others in US Dollar	
		Participants	Companion	Students/ Faculty	Participants	Companion
1	Full 3 days International Conference	20,000/-	5,000/-	5,000/-	400	150
2	Day 2 & 3 of the conference	15,000/-	4,000/-	4,000/-	300	125
3	Day one of the Conference	8,000/-	2,500/-	2,500/-	150	75

Important:

- 14% Service Tax will be extra for the payment in INR.
- CIGRE AORC members are exempted from payment of Registration fee.
- 10% discount in registration fee to CBIP & CIGRE - India members.
- Companions are immediate relative or one normally residing with the participant
- However the spot registration is available to a limited extent, it is advisable to register well in advance.

The registration fee covers the cost of registration kit, Conference proceedings, lunches and tea in-between technical sessions. The participants will have to make their own arrangements for travel, boarding and lodging.

SPONSORSHIP OPPORTUNITIES

The Conference provides an effective opportunity for sponsoring companies to promote their products/services to a focused audience, besides networking with engineers of utility, manufacturers and academic institutions during tea/coffee and lunch intervals. Sponsors are assured of full visibility with printing of their names on proceedings, banners and other publicity material related to Conference and will have the privilege of distribution of their product's pamphlets/catalogues during the Conference. Sponsors will also have the privilege of sending delegates exempted from payment of registration fee as indicated hereunder:

Category of Sponsorship	Fee in Rs.	Privileges
Platinum	5,00,000	<ul style="list-style-type: none"> • Display of Logo on Main banner & other publicity material • Free Delegates in the conference (10 Nos.) • Free editorial in the proceedings (2 pages) • Advertisement on Back Cover of Proceedings • Table space for display of services at the venue
Gold	3,00,000	<ul style="list-style-type: none"> • Display of Logo on Main banner & other publicity material • Free Delegates in the conference (05 Nos.) • Free editorial in the proceedings (1 pages) • Advertisement in side Back Cover of Proceedings • Table space for display of services at the venue
Silver	2,00,000	<ul style="list-style-type: none"> • Display of Logo on Main banner & other publicity material • Free Delegates in the conference (03 Nos.) • Advertisement in side Proceedings
Supporter	1,00,000	<ul style="list-style-type: none"> • Display of Logo on Main banner & other publicity material • Free Delegates in the conference (01 Nos.)

For further details, please contact the Conference Secretariat.

CALL FOR ADVERTISEMENTS

A limited space for insertion of advertisements in the Conference proceedings is available at the following rates:

Position	Charges for Colour Advertisements	
	SAARC Countries (Indian Rs.)	Other Countries (US\$)
Back cover page	50,000	1000
Second or third cover page	30,000	600
Full page (23 cm x 18 cm)	15,000	300

PAYMENTS FOR THE EVENT

The payments for the event (registration fee, sponsorship & Advertisement are to be made to CIGRE India by the following methods:

- Banker's cheque payable to : Central Board of Irrigation and Power, New Delhi
- Bank transfer: Bank charges if any are to be borne by participants

Beneficiary Name (Payee Name & address)	Central Board of Irrigation & Power, Malcha Marg, Chanakyapuri, New Delhi 110021
PAN No. : AAAJC 0237F	Service Tax Numbers : AAAJC 0237F ST001
Complete Bank Details :	Bank Name: HDFC Bank Saving Bank Account Number : 00031110004411
	Branch & Address : G-3/4, Suryakiran Building, 19, Kasturba Gandhi Marg, New Delhi 110001
	Branch /RTG/NEFT IFSC : HDFC0000003 MICR Code : 110240001 Swift Code : HDFCINBBDEL

All the payments details for the event to be furnished along with the registration form and Name of the event should be mentioned under subject in all the correspondence relating to this event.

Note : No other method of payments is acceptable.

ACCOMMODATION

The official venue hotel for the Conference is : Hotel VIVANTHA by Taj, Sector 21, Metro Station Complex, Dwarka, New Delhi -110075, India

Limited number of rooms have been blocked from 23rd - 28th February, 2016 to secure accommodation for the participants attending the conference. The preference will be given on first come first serve basis.

Hotel Name	Room Category	Location	Distance from Venue	Charges for Single/ Double
Hotel VIVANTHA by Taj	Deluxe	Dwarka, New Delhi	Venue Hotel	INR 6500 US \$ 100

- The special rate is inclusive of taxes & complimentary buffet breakfast at the coffee shop.
- The check in & checkout time is 1400 Hrs. & 1200 Hrs. Noon respectively
- In case of early check in before 1200 Hrs., please secure reservation from previous night.
- Rooms availability is on first come first serve basis only.
- The special tariff is valid only during the Conference period.

The above negotiated rates are offered for booking through CIGRE-India only. The Participants are advised to send their requirement and make reservation for accommodation well in advance and for assistance they may contact CIGRE-India the Conference Secretariate.

GENERAL INFORMATION

Official Language : The official language of the Conference is English.

Official Invitation : The invitation contained in this bulletin should generally suffice to plan travel formalities. However, should an official invitation is needed; the same can be sent by the organizers on request.

Visa and Custom Requirement : All visitors to India require a visa, except visitors from Nepal and Bhutan. The best place to get your visa is at Indian Embassy and High Commissions in your country of residence. Please check your nearest Embassy, Consulate or High Commission for all the details for getting visa. Keep your passport with you at all the time

Banking & Communication Facilities : Foreign exchange facilities, fax and phone service are available at the venue hotels of the Conference.

Climate : The maximum temperature at Delhi in the second and third week of February ranges from 20-23°C and minimum temperature from 4-7°C. Relative humidity maximum 55 - 60% and minimum 12-14%.

INDIA - THE HOST COUNTRY

India – the very name conjures images of vibrant colors, mysticism, royalty; an amalgam of religions, a kaleidoscope of art and culture, all of which find expression in the beautiful temples, sculptures and monuments. India’s ancient and diverse culture, sweeping back at least 5000 years, with successive waves of migration absorbed into the fabric of Indian life, has enriched it time and again to make a multi-cultural nation with a rich diversity of languages, customs, cuisines, religions, literature and arts. Within this kaleidoscope of immense variety there is a thread of continuity that has determined Indian civilization and social structure.

India, it is often said, is not a country but a continent. From north to south and east to west, the people are different, the languages are different, and the country is different. There are few countries on earth with the enormous variety that India has to offer.

India is a land of romance and dreams, of splendor and extravagance, of forts and palaces, beaches and jungles, a kaleidoscope of vibrant colors and rituals. Explore the diversity of Northern India expressed by the mystic ambience in Varanasi, through the architectural magnificence of the Taj Mahal in Agra and the majestic forts and palaces of Gwalior and Rajasthan. India rewards the traveller with her timeless landscapes, spectacular architecture, monumental history, cultural kaleidoscope and undeniable aura of romance and mysticism. To explore India is to discover unending secrets to the mystery of life, to enjoy India is to celebrate the very fact of living.

New Delhi - The Host City

The Capital City of modern India has behind it centuries of history, which has enriched its culture. Broad tree-lined avenues and vistas suddenly give in to narrow alleys of cobble stones - taking you to an age of kings, princes, valour and bravery. Small shops huddled together, groan under the burden of age; small “dhabas” (roadside restaurants) selling freshly prepared delicacies; a wonderful collection of curious, handicrafts, jewels and jewellery. All within a few metres of fast-food restaurants serving everything from pizzas and hamburgers to colas and lemonades; glitzy shopping plazas; air-conditioned designer boutiques. This reflects the true spirit of New Delhi. Delhi is one of the world’s best shopping centers. From handicrafts and antiques to all modern utilities — Delhi’s shopping centers offer you everything under the sun. Delhi has all the modern facilities for hosting Conferences. It has a number of good hotels, which offer the best of the two worlds – international luxury combined with oriental hospitality.

For more details please contact Conference Secretariat.

CIGRE INDIA (Conference Secretariat)

C/o Central Board of Irrigation and Power, Malcha Marg, Chanakyapuri, New Delhi 110 021 India

Phone : 011-2611 5984/2687 6229/2688 0557; Fax : 011-2611 6347 E-mail : cbip@cbip.org, Website : www.cbip.org

Contact person:

Mr. V.K. Kanjlia, Secretary, CIGRE India, kanjlia@cbip.org & **Mr. P.P. Wahi**, Director, wahi@cbip.org

Mr. Vishan Dutt, Sr. Manager (Tech.), CIGRE India - (Mobile No. 09811431554)

E-mail : vishandutt@cbip.org; cbip@cbip.org; Website: www.cbip.org

REGISTRATION FORM

Willing to attend Int. Conference : Day 1 Day 2&3 Full 3 Days (Pl. tick)

Delegate Name:..... Designation:.....

Organisation:Address for Correspondence.....

Phone.....Fax.....E-mail.....

• Companion if any :

(Companions are immediate relative or one normally residing with the participant)

Accommodation in venue Hotel : Required Not Required

Details of Registration fee Paid: