6th Annual Conference

TRANSMISSION LINES, TOWERS AND SUBSTATIONS

October 30-31, 2018, The Leela Ambience, Gurugram

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TRANSMISSION LINES, TOWERS AND SUBSTATIONS

Mission

- India's electricity market is poised for significant growth in the coming years. The rising demand for power, provision of universal access to electricity and integration of new renewable energy generation sources are driving investments in the development of transmission infrastructure.
- However, the transmission sector faces several challenges including greater risk of instabilities and blackouts, and increasing energy costs and volatility. Thus, innovations are being made in the design and construction of lines, towers and substations to meet the objectives of grid reliability, cost competitiveness and environmental impact.
- New tower designs that address RoW issues, reduce visual impact, enable faster execution and provide ease of installation have entered the transmission market. Advancements have also taken place in tower profiles, foundation designs and materials used for tower construction.
- Advanced conductor and cable technologies like high temperature low sag (HTLS) are playing an important role in providing greater efficiency and ease of design, both for new lines and for line uprating and reconductoring. XLPE cables and gas-insulated lines (GILs) offer attractive alternatives to underground lines in urban areas. High performance conductors are also being considered for deployment, given their low RoW requirement and the ability to carry higher volumes of power.
- Transformer technologies have evolved over the years. Conventional oil-filled transformers are being replaced with dry-type transformers. The next generation transformer technologies including smart transformers are equipped with remote monitoring features that control a wide range of grid parameters as well as transformer parameters.
- Utilities are now opting for gas-insulated switchgear and hybrid switchgear, as they require less space, and reduce the cost of construction and maintenance. A new breakthrough in switchgear technology is the use of an eco-friendly insulation mixture to address the environmental concerns of SF6 in switchgear. Another emerging trend in the switchgear segment is the use of intelligent switchgear, which enables the real-time flow of information.
- Grid automation helps secure real-time and enterprise-wide information and helps improve the overall reliability of the system. As a robust and reliable communication system forms the foundation of such an automated grid system, utilities are deploying various technologies such as optic fibre, VSAT and IEC 104 protocol on digital PLCC for data transfer.
- Digitalisation is another fast emerging trend, driven by the need to introduce efficiency in grid operations and O&M. With benefits such as increased flexibility and availability, reduced cost, and lower risk and environmental impact, a greater uptake in the deployment of digital substations has been seen across utilities.
- With advancements in transmission equipment technology, design and construction methods, technologies like helicopter stringing, light detection and ranging, sky crane and unmanned aerial vehicles or drones are used in the planning, design and construction of overhead transmission networks.
- Digital and robotic solutions are being deployed to improve productivity and minimise operations and maintenance costs. These include advanced analytics and geospatial data for asset management, geographic information system-based tracking of assets, remote monitoring and control equipment and smart field force management.
- **The mission of the conference is to highlight the most promising technologies and viable solutions to deliver a reliable and secure transmission grid infrastructure. It will also present the experience so far with these technologies and the emerging trends, and showcase successful projects and best practices.**

Previous Participants

Some of the participants from our previous transmission conferences were: ***A.P. Transco, A2Z, ABB India Limited, ACB, Accenture, ACME, Adani, Adani transmission, Adhunik Power, Aditya Birla Insulators, AES, AIC Steel, Airbus Group, Alstom T&D, Altec Industries, Amara Raja, AMAT, Angelique International Limited, Apar Industries, APTRANSCO, Arcturus Business Solutions LLP, Arresto Solutions, Assam Electricity Grid Corporation, Associated Power Structures, AVEVA Information Technology, Aveva Information Technology India Pvt Ltd, Bain & Company, Bajaj Electricals Ltd, Barclays, Bechtel, Bekaert, Bentley Systems, BGR Energy, BHEL, Bihar State Power Transmission Co.Ltd, BNC Power Projects, Bothe Windfarm Development, Brugg Cables, Burns McDonnell, Cabcon, Cargill, CESC, Chloride Power Systems, CLP, CRISIL, Crompton Greaves, CTC Global, Customized Energy Soultions, Damodar Valley Corp, Delhi Transco, Dhreshwar GEB-400 KV Jetpur, DNV-GL, DSP Merrill Lynch, Easun -MR Tap Changers, EDAC Engineering, Electrotherm, Elite Powertech, EMC, Entegra, ERA T&D, ERDA, Essar Power, Exide Industries, FLIR, Focal Energy, France Elevateur, Galaxy Transmission, Gammon, Garware -Wall Ropes, GE, GETCO, GIZ, Godrej & Boyce, Good Luck Steel, Gupta Power, Himalayan Heli Services, Hind Aluminium, HPERC, HVPNL, Hyosung T&D, iEngineering, IFC, IL&FS Energy Development, Inabensa, India Power, Indian Railways, Indo-German Energy Forum, International Energy Resources, Isolux Corsan, IVRCL TLT, Jagdamba International, Jaigad Power Transco, Jindal Steel & Power, J-Power Systems, JSK Industries , JSW Power Trading, Jyoti Structures, Kalpataru Power Transmission, Karamtara, Karnataka Power Transmission, KEC International, KEI Industries, Kloeckner DESMA Machinery, KSEB, L&T (Kudgi Transmission), L&T Infra Finance, L&T Sargent & Lundy, Lara Global, M&I Materials, MacLean Power, Maha Transco, Maharashtra SLDC, MAN Structurals, MAP Power LLP, Maschinenfabrik Reinhausen GmbH, Mitsui & Co. India Pvt Ltd, MMC UAV, Modern Insulators, MP Power Transmission, MTEK PRO, Nandan Steels & Power, NLC, NTPC, Odisha Power Transmission Corporation Limited, Orange Renewable Power, Parbati Koldam Transmission, PFC, POSOCO, Power Grid, Power Transmission Corporation of Uttarakhand Ltd, Powerlinks, Pradman Engineering Services, Primtech, PSTCL, PTC, Punj Lloyd, Purulia & Kharagpur Transmission, PwC, R.S. Infraprojects, Ramboll, Ramelex, REC Transmission, Reliance Infrastructure, Rites, RRVPNL, SAIL, SBI, SBI Capital Markets, Septett Advisory Services, SGD La Granja Vidrieria, Shenzhen Micromulticopter Aero Technology, Shyam Indus Power, Sicame, Siddhartha Engineering, Siemens, SJVNL, Skipper, SMEC, State Grid Corporation of China, Sterling and Wilson, Sterlite Power Grid, Sumitomo, Supreme & Co., Suzlon Energy, Tag Corporation, Tamil Nadu Transmission Corporation, Tata Power, Tata Projects, Taurus Powertronics, TBEA, TESMEC, Tokyo Rope Mfg., Torrent Power, Transrail Lighting, Trimble Solutions India , TSE International, UbiFrance, UPPTCL, Utkarsh Tubes & Pipes, Valmont Structures, Virtuous Energy, WBSETCL, Wipro, Yes Bank, ZTT Cable,*** *etc.*

AGENDA/STRUCTURE

KEY TRENDS AND OUTLOOK
- What are the key trends in technology adoption by the power transmission sector?
- What are the new and emerging requirements?
- What are the key issues and challenges?

POWERGRID'S PERSPECTIVE
- What are the plans for the development of the transmission network?
- What are the issues faced by the utility in project execution?
- What technology options could address these issues?

OPERATOR/DEVELOPER PERSPECTIVE
- What has been the project execution experience of operators and developers?
- What are the issues and challenges faced?
- What are some of the innovative designs and technologies being introduced in the market?

EPC PERSPECTIVE
- What has been the experience of EPC firms in executing projects?
- What are the key issues and challenges faced in the execution?
- What are some of the new designs, technologies, solutions and practices being adopted for project execution?

DESIGN, CONSTRUCTION AND STRINGING OF TRANSMISSION LINES
- What have been the developments in the design of transmission lines?
- What are the key considerations and challenges in the construction of new transmission lines?
- What are the new techniques being utilised for transmission line stringing?

TOWERS AND FOUNDATIONS
- What tower designs and structures are being deployed to optimise right-of-way requirements?
- What are some of the developments in foundations aimed at reducing their environmental impact?
- What are the major challenges and considerations in the design of towers and structures?

DESIGN AND AUTOMATION OF SUBSTATIONS
- What are the key considerations and challenges in substation design?
- What are the substation automation solutions being offered by the industry?
- What are some of the key benefits that these technologies and solutions can offer to utilities?

ADVANCED CONDUCTOR TECHNOLOGIES
- What technologies are being adopted to improve conductor performance?
- What are the trends in the uptake of HTLS, superconductors, XLPE cables and GILs by utilities?
- What are the issues and challenges?

TRANSFORMER AND SWITCHGEAR TECHNOLOGIES
- What are the latest transformer and switchgear technologies?
- What are the trends in the uptake of smart transformers and switchgear by utilities?
- What are the issues and challenges?

COMMUNICATION INFRASTRUCTURE
- What are the new solutions for creating communication infrastructure for the grid?
- What are the plans of transmission utilities in this regard?
- What are the key issues and challenges?

TOWER REPAIR TECHNIQUES AND SOLUTIONS
- What are some of the new tower repair techniques and solutions?
- What are the best practices in this regard?
- What are the key challenges?

RECONDUCTORING AND UPRATING OF LINES
- What are some of the solutions for uprating and reconducturing existing lines?
- What are the economic and technical criteria for selecting conductors in this regard?
- What are the issues and challenges?

AERIAL TECHNOLOGIES
- What are some of the applications of aerial technologies in the design, construction and O&M of transmission assets?
- What are the trends in the uptake of aerial technologies by utilities?
- What are the issues and challenges?

ASSET MAINTENANCE AND MONITORING
- How have asset management strategies evolved over the past few years?
- What are the new technologies and analytics solutions for asset maintenance?
- What are the methods being deployed for monitoring of transmission assets?

PROJECT SHOWCASE
- What are the key project features (components/technology, design approach, etc.)?
- What were the issues and challenges faced?
- What lessons can be learnt?

Target Audience

The conference is targeted at:

- Transmission companies
- Interstate transmission operators
- Technology providers
- Transmission structure manufacturers (towers and substations)
- Conductor manufacturers
- Transmission line manufacturers
- State electricity boards
- Private developers
- Foundation and piling companies
- Private utilities
- Design and consulting organisations
- Steel companies, etc.

Organisers

The conference is organised by **Power Line** and **Global Transmission**. **Power Line** is a leading provider of information on the power sector. Its parent company, **India Infrastructure Publishing**, provides information on infrastructure sectors through magazines, newsletters, reports and conferences. It publishes a range of magazines including **Renewable Watch** and **Smart Utilities**.

Global Transmission is a provider of information and analysis on the global electricity transmission industry. It organises conferences on crucial issues and topical themes relevant to the transmission industry. It also publishes a series of reports including **Global Transmission Substation Market** and **Upcoming Projects Report, Global Electricity TSO Profiles and Benchmarking Report, Global High Voltage Transmission Line Projects Database and Report, Global Electricity Transmission Equipment Market Report** and **Global Transmission Investment Report**.

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Registration Form

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Registration Fee

	20 per cent discount (before October 9, 2018)		Fee post October 9, 2018			
Delegates	Total INR (incl. tax)	Total USD	INR	Service tax @ 18%	Total INR	Total USD
One delegate	23,600	393	25,000	4,500	29,500	492
Two delegates	37,760	629	40,000	7,200	47,200	787
Three delegates	51,920	865	55,000	9,900	64,900	1,082
Four delegates	66,080	1,101	70,000	12,600	82,600	1,377

- There is a 20 per cent "early bird" discount for those registering before October 9, 2018.
- There is a special low fee of Rs 5,000 per participant for the state electricity boards and their successor units (state-owned transcos), regulatory authorities and research/academic institutions.
- Registration will be confirmed on receipt of the payment.
- To register online, please log on to http://indiainfrastructure.com/conf.html

Payment Policy:

- The conference is a non-residential programme.
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- Conference fee includes lunch, tea/coffee and conference materials.
- Conference fees cannot be substituted for any other product or service being extended by India Infrastructure Publishing Pvt. Ltd.

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