

13<sup>th</sup> Edition

# Power Transmission in India

A VIRTUAL CONFERENCE

Plans and Opportunities, Technologies and Solutions

July 14-15, 2020



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**POWERLINE**

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# POWER TRANSMISSION IN INDIA

## Mission

- The transmission sector in India has seen considerable growth in the past few years owing to increasing power demand and generation capacity. Besides the transfer of power from generating stations to load centres, the creation of a synchronous national grid - One Nation-One Grid-One Frequency - has also facilitated the smooth functioning of power markets in the country. Further, regulatory reserves ancillary services have helped in congestion management and grid optimisation at the regional and pan-India levels.
- In the coming years, the growth of the transmission sector will be mainly driven by the need to evacuate large-scale renewable energy. With a target to set up 175 GW of renewables by 2022 and 450 GW by 2030, the transmission system will require significant expansion and strengthening.
- The focus is also on the creation of a regional power grid to utilise resources in the South Asian region in an optimal manner and help stabilise the Indian grid in the wake of increasing renewables. To realise the vision of a unified regional grid, there is a need to build new transmission networks and strengthen existing ones.
- Further, Indian Railways, as part of its long-term vision to improve power reliability, plans to have a dedicated transmission line network that will provide reliable power at a reasonable cost. By 2023, it plans to electrify about 27,000 route km for achieving its 100 per cent electrification target.
- The introduction of competition in transmission at the interstate level has significantly reduced tariffs and project completion time, and improved efficiencies. At the intra-state level too, the state utilities of Jharkhand, Bihar and Uttar Pradesh have started awarding transmission projects through competitive bidding.
- With renewable energy playing a bigger role in the country's generation mix, maintaining grid resiliency and security will become paramount, and utilities will be required to adopt solutions for generation forecasting and grid balancing. Apart from expanding the physical grid, Indian utilities are expected to invest in new technologies to make grids more reliable, resilient, secure and smart. Besides, the emerging trends in smart cities, digitalisation, energy storage and telecom are expected to provide new business opportunities to players in the transmission sector.
- While there are numerous opportunities for growth in the transmission sector, the challenges are aplenty too. From a grid planning perspective, these challenges pertain to the short gestation period of renewable energy plants and reactive power management; operational constraints owing to the variability of renewables; right-of-way issues; and cybersecurity of networks. Advanced grid solutions such as STATCOMs, FACTS, HVDC, HTLS conductors and real-time data monitoring tools to overcome these challenges.
- The recent outbreak of the coronavirus disease (COVID-19) has impacted grid operations and preventive measures are being taken to tackle the pandemic's impact on the utilities' day-to-day activities, ongoing transmission projects and future development plans.
- **The mission of this conference is to discuss the recent trends and developments, and highlight the future plans and upcoming opportunities in the Indian power transmission sector. The conference will highlight some of the new and emerging challenges in the sector, and the possible solutions and strategies. It will discuss best practices in asset investment planning and solutions to help utilities better manage their transmission assets. The conference will also showcase the relevant technologies and noteworthy projects.**

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## Organisers

The conference is being organised by **India Infrastructure Publishing**, the leading provider of information on the infrastructure sectors through magazines, newsletters, reports and conferences. It publishes **Power Line** (the premier magazine for the Indian power sector), **Indian Infrastructure** and **Renewable Watch** magazines. It also publishes a series of reports on the energy sector including **Power Transmission in India**, and **T&D Equipment Market in India**. The company also publishes **Power News** (a weekly newsletter) and the **Power Line Directory and Yearbook**.

**Global Transmission** is a leading provider of information and analysis on the global electricity transmission industry. It publishes the **Global Transmission Report** (a monthly newsletter), **Global Transmission Weekly** (a weekly update), and a report on **Global Electricity Transmission**, and operates [www.global-transmission.info](http://www.global-transmission.info).

# PLANS AND OPPORTUNITIES, TECHNOLOGIES AND SOLUTIONS

## AGENDA/STRUCTURE

### KEY TRENDS AND OUTLOOK

- ❖ What are the recent trends and developments in the power transmission sector?
- ❖ What are the grid expansion targets for the next few years?
- ❖ What are the key issues and challenges?

### POWERGRID'S PERSPECTIVE

- ❖ What are Powergrid's investment plans and capacity addition targets for the next few years?
- ❖ What are the priority areas for the next few years?
- ❖ What are the key initiatives underway for the development of the interstate transmission network?
- ❖ How is Powergrid addressing RoW issues?

### GRID OPERATOR PERSPECTIVE

- ❖ What steps are being taken to meet the changing grid requirements (renewable energy, energy storage, cross-border trade, etc.)?
- ❖ How has POSOCO's experience been in the implementation of FRAS and SCED? What is the outlook for the ancillary services market?
- ❖ What will be the impact of the real-time market on grid operations?
- ❖ What steps are being taken to ensure grid stability and reliability, especially due to the decline in demand during COVID-19 lockdown?

### STATE UTILITIES' PERSPECTIVE

- ❖ What are the investment plans of various state utilities for the next few years?
- ❖ What are the key initiatives being taken by various state utilities?
- ❖ How are STUs addressing RoW issues? What are the other key issues and challenges?
- ❖ What new grid technologies/solutions are being considered, especially to prepare the grid for future crisis?

### PRIVATE PLAYERS' VIEWPOINT

- ❖ What has been the experience with competitive bidding?
- ❖ What are the issues and challenges faced by private players in the power transmission sector?
- ❖ What is the future outlook for private players in the sector?

### UPDATE ON TBCB

- ❖ What is the status of interstate TBCB projects awarded so far?
- ❖ What is the future project pipeline for interstate TBCB projects?
- ❖ What steps are being taken to enhance private participation, particularly at the state level?
- ❖ What is the impact of COVID-19 on TBCB award process?

### CREATING A REGIONAL POWER MARKET

- ❖ What is the current level of cross-border power exchange between India and its neighbours?
- ❖ What are the steps being taken to enhance cross-border trade? What are the planned cross-border transmission projects?
- ❖ What are the key issues and challenges?

### RAILWAY ELECTRIFICATION PLANS

- ❖ What are Indian Railways' electrification plans for the next few years?
- ❖ What are expected opportunities for T&D equipment and service providers?
- ❖ What are the key issues and challenges?

### TECHNOLOGIES FOR FUTURE GRID

- ❖ What are the latest technological developments in transmission towers, conductors, transformers and switchgear?
  - ❖ What is the expected role of FACTS and HVDC in the power system?
  - ❖ What are the key benefits offered by these technologies?
  - ❖ What are the challenges in the adoption of these technologies?
- This session will cover various technologies and emerging solutions such as multi-circuit towers, monopoles, HTLS, XLPE, HPC, GIL, GIS, hybrid switchgear, green conductors and switchgears.*

### GRID MODERNISATION AND DIGITALISATION

- ❖ What are some of the solutions available for modernising the grid?
- ❖ What are the utilities' plans for smart grids and their status?
- ❖ What are the benefits of digitalisation for utilities?

### RENEWABLES INTEGRATION AND ENERGY STORAGE

- ❖ What are the key challenges in the grid integration of renewable energy?
- ❖ What are the solutions for generation forecasting, optimisation and balancing?
- ❖ What is the update on Green Energy Corridors?
- ❖ What is the role and relevance of energy storage for the utilities?

### ADDRESSING CYBERSECURITY ISSUES

- ❖ What are the initiatives being taken to improve cybersecurity of the grid?
- ❖ What lessons can be learnt from global experiences?
- ❖ What are the issues and challenges?

### O&M OF TRANSMISSION ASSETS

- ❖ What are the technology and analytics solutions available to help utilities better manage their transmission assets?
- ❖ What new technologies/solutions are being considered, especially for O&M in a crisis situation?
- ❖ What are the best practices for O&M of transmission assets? How can they help utilities improve asset utilisation?

## Target Audience

The conference is targeted at officials and managers from:

- ❖ Transmission companies
- ❖ State electricity boards
- ❖ Interstate transmission operators
- ❖ Private developers
- ❖ Technology providers
- ❖ Equipment manufacturers
- ❖ Regulatory agencies
- ❖ Power generation companies (public/private)
- ❖ Distribution companies
- ❖ Utilities (public/private)
- ❖ Funding agencies
- ❖ Consulting organisations, etc.

# POWER TRANSMISSION IN INDIA

## 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.
- The **participants** in each conference receive a **concise report outlining** the **key facts**, **trends** and **issues** in the sector.
- 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)
- Concise report offered as a backgrounder
- 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

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### Previous Speakers:

**Subir Sen**

ED-COO, CTO/Smart Grid, Power Grid

**Seema Gupta**

Director (Operations), Power Grid

**Anil Sardana**

MD & CEO, Adani Transmission

**R.N. Singh**

ED (Engineering & FQA), Power Grid

**H.R. Panday**

Director, Projects, Bihar State Power Transmission Company

**Anil Rawal**

Sr. VP, Sterlite Power

**Sandip Sinha**

VP, Micro Grid, ABB

**Chantal Robillard**

Senior Product Manager Digital Services, GE Power

**R.K. Chauhan**

Director-Projects, Power Grid

**S.K. Soonee**

Advisor, Power System Operation Corporation

**Ved Mani Tiwari**

CEO - Sterlite Power

**B.B. Chauhan**

Managing Director, Gujarat Energy Transmission Corporation

**R.K. Khandelwal**

Additional Chief Engineer, Madhya Pradesh Power Transmission

**Nihar Raj**

Vice President, ABB

**Mukesh Wadhwa**

Sales Leader- Smart Grid & Smart Cities, GE T&D India

**Thayagraj Ramachandran**

Superintending Engineer, Karnataka Power Transmission

### Previous Participating Utilities:



### Other major organisations included:

ABB, AP Transco, Aditya Birla Insulators, AES, Airbus, Alfanar Energy, AMAT, Amitasha Enterprises, AnshikaFastners, Apar Industries, Applied Materials India, Arcturus Business Solutions LLP, Asta, Attec Worldwide, AVEVA Information Technology India, Bajaj Electricals, BBMB, Bekeart, Bentley Systems, Bharat Heavy Electricals, Bothe Windfarm Development, Brugg Cables, BSPTCL, Burns and Mc Donnell, Cabcon, Cargill, CESC, CG Power and Industrial Solutions, CLP, CTC Global, Customized Energy Solutions, Delhi Transco & Delhi Power, DSP Merrill Lynch, Edelweiss Asset Reconstruction, Electrotherm, Elite Powertech, EMC, EntegraGMBh, Equirus Securities, ERA T&D, Eros Group, ESRI, Essel Infra Projects, Exide Industries, FLIR, Ganges International, GE Grid Solutions, GETCO, GIZ, Guangzhou Goaland Energy, Gujarat Energy Transmission Corporation, Harshini Tele Systems, Himachal Pradesh Electricity Regulatory Commission, HSA Legal, Hyosung, IDFC, IFC, IL&FS Energy Development Company, Indian Railways, Indolite Devices, Jaigad Power Transco, JERC, JSK Industries, JSPL, JSW Power Trading Company, Kalpataru Power Transmission, KEC International, KEI Industries, KPTCL, Lara Global, Larsen&Toubro, Lucky Investment, M&I Materials, M.P. Power Transmission, Man Structural, MAP Power LLP, MMC UAV, Modern Insulators, MotilalOswal Securities, Motwane, MPPTCL, National High Speed Rail Corporation, NEDO, NPTI, Paramount Communications, Phoenix Contact, Power Grid, Powerlinks Transmission, Premji Invest, PTC Financial Services, OPTCL, Orange Renewables, Parbatikoldam Transmission Company, POSOCO, Power Grid Corporation of India, PricewaterhouseCoopers, PSPTCL, Punj Lloyd, Purulia & Kharagpur Transmission Company, Quality Austria Central Asia, Rajasthan RajyaVidyutPrasaran Nigam, Ramelex, Reliance Infraprojects, Reliance Power Transmission, REMC, RS Infraprojects, RVPNL, SAIL, SBI Caps, Septett, SHARDA University, Shree Kaushal Fabricators, Siemens, Shyam Indus Power Solutions, Sicame, Sicame India, Siemens, Skipper, State Grid Corporation of China, Sterling and Wilson, Sterlite Power Grid Ventures, Supreme, Suzlon, Supreme & Co, Tata Power, Tata Projects, Taurus Powertronics, TAG Corporation, Tagbin, Tata Projects, Technical & Mgmt. Consultant, TelegencePowercomm, TESMEC, Testo, Torrent Power, Tokyo Ropes, Transmission Corporation of Andhra Pradesh, Transmission Corporation of Telangana, Transrail Lighting, Trimble, Utkarsh Tubes & Pipes, Valmont Structures, Virtuous Energy, Voyants, WBSETCL, West Bengal State Electricity Transmission Company, Wroora Kurnool Transmission, etc.

To register: Call +91-8587065590, 6366804343, email: priyanka.rawat@indiainfrastructure.com

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## SNAPSHOTS FROM PREVIOUS YEAR



### Registration Fee

	INR	GST@18%	Total INR	Total USD
1 Delegate	9,000	1,620	10,620	150
2 - 3 Delegates	15,000	2,700	17,700	250
4 - 5 Delegates	21,000	3,780	24,780	350
6 - 9 Delegates	27,000	4,860	31,860	450
10 - 20 Delegates	33,000	5,940	38,940	550

- GST @18 per cent is applicable on the registration fee.
- Registration will be confirmed on receipt of the payment.
- To register online, please log on to <https://indiainfrastructure.com/events/13th-annual-conference-on-power-transmission-in-india/>

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Sponsorship opportunities are available

### 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.

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