

14<sup>th</sup> Edition

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**POWERLINE**

# Power Transmission in India

A VIRTUAL CONFERENCE

Changing Utility Requirements, New Solutions and Technology Roadmap  
April 27-28, 2021



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# POWER TRANSMISSION IN INDIA

## Mission

- India's power transmission sector has seen considerable growth in the past few years owing to the increasing power demand and capacity addition, especially in the renewables segment. The sector has remained largely unaffected and resilient even during Covid-19. The past growth momentum is expected continue in the future as well, with the sector expecting over Rs 3 trillion worth of investment over the next five years.
- " Grid expansion is being driven by the need to evacuate power from the upcoming renewable energy projects with ambitious targets of 450 GW by 2030. Key projects like Green Energy Corridors and Transmission System for Renewable Energy Zones are underway to facilitate the integration of renewable energy into the grid. The large-scale renewable energy integration will also require the adoption of solutions for generation forecasting, grid balancing and reactive compensation.
- " Private participation at the interstate transmission level continues to grow. Recent years have seen stiff competition, with new players participating in the bid process. At the intra-state level, state utilities are gradually coming forward to award transmission projects through competitive bidding.
- " InvITs are emerging as an attractive avenue for monetising seasoned transmission assets to finance new transmission infrastructure. Sterlite Grid has already launched an InvIT, namely IndiGrid, and Powergrid expects to follow suit soon, becoming the first state-owned company to do so.
- " Work on creating a unified regional grid continues at a steady pace, and new interconnections are underway with Nepal, Bhutan and Bangladesh. A regional grid will help utilise resources in the South Asian region in an optimal manner and stabilise the Indian grid in the wake of increasing renewables. The government's recently announced "One Sun One World One Grid" initiative for connecting solar energy supply across borders is a leap from a regional grid system towards an inter-continental grid.
- " Although the sector offers numerous opportunities to all stakeholders, it also poses several challenges. Project developers face delays in project completion due to challenges in RoW, land acquisition, statutory approvals, and contractual disputes. From a grid planning perspective, there are challenges due to the short gestation period of renewable energy plants, and operational constraints owing to the variability of renewables and cybersecurity of networks. Advanced grid solutions such as STATCOMs, FACTS, HVDC, HTLS conductors and real-time data monitoring tools will help overcome these challenges.
- " The future Indian power grid will be required to be more flexible, smart and resilient with growing decarbonisation and digitalisation across sectors. In addition to building new infrastructure, the utilities will focus on modernising and strengthening their grid networks. Significant demand is expected to come up for retrofitting, uprating and upgrading networks, which includes replacing conductors to better utilise the existing RoW. Going forward, Indian utilities are also expected to invest in new technologies to make the grid more reliable, resilient, secure and smart.
- " **The mission of this conference is to discuss the future plans of leading utilities and investment opportunities in the Indian power transmission sector. The conference will highlight the recent trends and emerging challenges in the sector, and the possible solutions and strategies. It will also showcase the latest technologies and innovative solutions that can help utilities create efficient, reliable and modern grids, and better manage their transmission assets. The conference will also showcase the relevant technologies and noteworthy projects.**

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## 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.

## 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 and network development plans for the next few years?
- ❖ What are the priority areas for the next few years?
- ❖ What are the key initiatives for the development of the interstate transmission network?
- ❖ What are the new technologies and solutions being adopted?

### GRID OPERATOR PERSPECTIVE

- ❖ What steps are being taken to meet the changing grid requirements (renewable energy, energy storage, cross-border trade, etc.)?
- ❖ What is the outlook for the ancillary services market?
- ❖ What will be the impact of the real-time market on grid operations?

### STATE UTILITIES' PERSPECTIVE

- ❖ What are the investment and network development plans of various state utilities for the next few years?
- ❖ What are the key issues and challenges?
- ❖ What are the new grid technologies and solutions being adopted?

### PRIVATE PLAYERS' VIEWPOINT

- ❖ What has been the experience in 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?

### POLICY AND REGULATORY PERSPECTIVE

- ❖ What are the new policy initiatives (MoP restrictions on equipment import, charges and losses waiver for renewable energy, guidelines for RoW compensation in urban areas, etc.) and their expected impact on the transmission sector?
- ❖ What are the recent regulatory developments (sharing of interstate transmission charges and losses, SANTULAN, SAMAST, etc.) and their expected impact on the sector?
- ❖ What are the key unaddressed policy and regulatory concerns?

### POWER TRADING AND INTERCONNECTORS

- ❖ What are the steps being taken to enhance cross-border trade?
- ❖ What is the status of the key planned cross-border transmission projects?
- ❖ What policies and regulatory frameworks are needed for economic power exchange?
- ❖ What are the key issues and challenges?

### INTEGRATING RENEWABLES AND ROLE OF 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 key initiatives such as GEC and Transmission System for REZs?
- ❖ What is the role and relevance of energy storage for utilities? What are the plans of utilities for energy storage to address network issues?

### TRANSMISSION FINANCING AND EMERGING ROLE OF InVITs

- ❖ What are the new & emerging avenues for financing transmission infrastructure?
- ❖ What are various sources of funding being considered by various utilities?
- ❖ What are the benefits offered by InVITs viz-a-viz traditional financing models? How has the experience with InVITs been so far?

### TECHNOLOGIES FOR FUTURE GRID

- ❖ What are the latest technological developments in transmission towers, conductors, transformers and switchgear?
- ❖ What is the expected role of FACTS, STATCOMS & 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, PST and switchgears.*

### NETWORK UPGRADE AND CAPACITY ENHANCEMENT

- ❖ What are the plans of utilities to upgrade the existing assets to meet the new grid requirements?
- ❖ What are the technologies and solutions for capacity enhancement?
- ❖ What are the key issues and challenges in the adoption of these technologies/solutions?

### 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?

### ROLE OF AI AND ML IN GRID OPERATIONS

- ❖ How are next-generation technologies such as AI and ML revolutionising grid monitoring and operations?
- ❖ What has been the experience of utilities so far?
- ❖ What are the plans of utilities to use these technologies/solutions?

### ASSET MANAGEMENT

- ❖ What are the new technologies for increasing asset life and reliability?
- ❖ What are the new technologies and solutions to help operators better manage their transmission assets?
- ❖ What are the best practices for the management of transmission assets? How can they help utilities improve asset utilisation?

# 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 Participating Utilities:**



**Previous Participants:**

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## Registration Fee

	INR	GST@18%	Total INR	Total USD
1 Login	12,000	2,160	14,160	200
2 - 3 Logins	20,000	3,600	23,600	350
4 - 5 Logins	28,000	5,040	33,040	500
6 - 9 Logins	36,000	6,480	42,480	650
10 - 20 Logins	42,000	7,560	49,560	800

- There is a 15 per cent discount for those registering before April 15, 2021.
- GST @18 per cent is applicable on the registration fee.
- Registration will be confirmed on receipt of the payment.

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- Conference fees cannot be substituted for any other product or service being extended by India Infrastructure Publishing Pvt. Ltd.

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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).

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