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12th Annual Conference on

Power Transmission in India

Future Grid Requirements, Strategies and Solutions

July 16-17, 2019, The Leela Ambience Gurugram

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POWER TRANSMISSION IN INDIA

Mission

- Sustained economic growth and burgeoning energy demand continue to drive the expansion of the country's power sector. An investment of around Rs 2.6 trillion is required in the transmission sector alone to meet the future peak load, which is expected to reach 234 GW by 2021-22.
- A significant portion of the future investment will be for the expansion of physical grid infrastructure. The private sector is expected to play an important role in achieving the country's grid expansion targets as competitive bidding gains momentum at both the interstate and intra-state levels. The competitive bidding process for interstate projects has resulted in the discovery of low tariffs and the faster execution of projects. State utilities are also looking to offer projects through the competitive bidding route.
- Grid expansion over the next few years will be be driven by the government's ambitious plan to scale up renewable energy to 175 GW by 2022. To develop associated power evacuation infrastructure, Power Grid Corporation of India Limited (Powergrid) along with state utilities is implementing the Green Energy Corridor project to connect 55 GW of new solar and wind capacity.
- A key challenge in rolling out a robust transmission infrastructure is financing. While Powergrid and state utilities continue to receive support from the government and multi-lateral donor institutions to execute their grid expansion plans, private developers are experimenting with innovative financing models such as InvITs. Recently, IREDA announced its plans to extend loan to transmission projects.
- The sector is expected to immensely benefit from major policy and regulatory reforms such as amendments to the Electricity Act and the Tariff Policy. Initiatives like Make in India and the directive to allow Powergrid to utilise its transmission assets for telecommunication purposes auger well for public and private developers, as well as domestic manufacturers.
- The creation of a regional power market is expected to help unlock the electricity trade potential in the region and optimise energy costs by sharing resources. Several cross-border projects are already under way or being finalised in this regard. These links are part of the country's larger plan of creating an integrated SAARC power market.
- Going forward, there will be a greater focus on cybersecurity as the adoption of smart technology picks up pace. Several regulatory and policy measures are already in place to address the issue of cybersecurity in the sector. These include the National Cyber Security Policy and regulations for communication systems for transmission. Further, the increasing energy storage capacity and large-scale electric vehicle (EV) deployment are expected to alter the demand-supply patterns and the grid must also be prepared to manage these changes effectively.
- Utilities are also expected to invest significant sums in new technologies to make grids more reliable, resilient, secure and smart. This translates into greater opportunities for high voltage transmission systems, innovative tower designs, substation automation, high voltage transformers and superconductors. While Powergrid has taken the lead in many of these areas, other transmission companies are expected to follow suit.
- **The mission of this conference is to discuss the trends and developments and highlight the future plans and 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 to address these. The conference will also showcase relevant technologies and noteworthy projects.**

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
- ❖ Private utilities
- ❖ Funding agencies
- ❖ Consulting organisations, etc.

FUTURE GRID REQUIREMENTS, STRATEGIES AND SOLUTIONS

AGENDA/STRUCTURE

KEY TRENDS AND OUTLOOK
- What are the recent trends and developments in the power transmission sector?
- What is the status on the grid expansion targets set for 2022?
- What are the key issues and challenges?

POWERGRID'S PERSPECTIVE
- What are Powergrid's investment plans and targets for the next few years?
- What are the priority areas for the next few years?
- What are the key initiatives being taken for the development of the interstate transmission network?

GRID OPERATOR PERSPECTIVE
- What steps are being taken to meet the changing grid requirements (renewables, energy storage, cross-border trade, EV, etc.)?
- What steps are needed for further development of the ancillary services market?
- What are the priority areas for the next few years?

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?
- What are the key issues and challenges faced in the intra-state transmission system?

PRIVATE PLAYERS' VIEWPOINT
- What has been the experience with competitive bidding?
- What are the issues and challenges faced by private players in the sector?
- What is the future outlook for private players in the sector?

POLICY AND REGULATORY PERSPECTIVE
- What are the new policy initiatives (Make in India, Utilisation of Transmission Assets for Telecom, etc.) and their expected impact on the transmission sector?
- What are the recent regulatory developments (EA2003 revisions, tariff policy amendments, etc.) and their expected impact on the sector?
- What are the key unaddressed policy and regulatory concerns?

TBCB UPDATE
- What is the status of the interstate tariff-based competitively bid (TBCB) projects awarded so far?
- What is the future project pipeline for interstate TBCB projects?
- What steps are being taken to enhance private participation, especially at the state level?

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

TRANSMISSION FINANCING
- What are the financing requirements of the sector?
- What are the key risks seen by financiers in transmission projects?
- What are the new and emerging business models for financing of transmission projects?

FOCUS ON TECHNOLOGY: SHAPING THE FUTURE GRID
- What are the latest technological developments in transmission towers, conductors, transformers and switchgears?
- How can utilities benefit from 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.

FOCUS ON FACTS AND HVDC
- What is the expected role of FACTS and HVDC installations in the power system?
- What are the key benefits of these technologies?
- What are the key projects being implemented using these technologies?

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

RENEWABLE INTREGRATION AND ENERGY STORAGE
- What are the key challenges in the grid integration of renewable energy?
- What are the solutions available 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?

EMERGING CYBERSECURITY CHALLENGE
- What are the various initiatives being taken to enhance cybersecurity of the grid?
- What lessons can be learnt from global experiences?
- What are the issues and challenges?

ELECTRIC VEHICLES AND CHARGING INFRASTRUCTURE: IMPACT ON GRID OPERATIONS
- What is the impact of EVs on grind planning, operation and reliability?
- What are the plans for building efficient and user-friendly EV charging infrastructure?
- What are the unaddressed issues and concerns?

ASSET MAINTENANCE AND MONITORING
- What are the technology and analytics solutions available to help utilities better manage their transmission assets?
- What are the best practices in management and monitoring of transmission assets?
- What benefits can utilities expect from these to improve asset utilisation?

POWER TRANSMISSION IN INDIA

Previous speakers:

Subir Sen
COO, CTU-Planning and Smart Grids,
Power Grid Corporation of India

B.B. Chauhan
Managing Director,
Gujarat Energy Transmission Corporation

S.K. Soonee,
Adviser,
Power System Operation Corporation

P. Dinesh,
Director, Finance,
Transmission Corporation of Andhra Pradesh

H.R. Panday,
Director, Projects,
Bihar State Power Transmission

Alok K. Roy,
Chief Executive Officer,
Reliance Power Transmission

Arun Kumar Mishra,
Director,
National Smart Grid Mission (NSGM)

Anil Rawal.
VP & Global Head, Business Acquisition,
Sterlite Power

L.N. Mishra,
Business Head,
Adani Transmission

Nimain Chanran Swain,
Senior General Manager,
Odisha Power Transmission Corporation

Sandip Sinha,
Vice President, Micro Grid,
ABB

Mukesh Wadhwa,
Sales leader- Smart Grid & Smart Cities,
GE T&D India

R.S. Baghel,
Superintending Engineer,
Madhya Pradesh Power Transmission

Thayagraj Ramachandran,
Superintending EE, Electrical, SCADA,
Karnataka Power Transmission

K.D. Daware,
Executive Engineer,
MSETCL

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SNAPSHOTS FROM PREVIOUS YEARS

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**. 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.

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Delegates	INR	GST @ 18%	Total INR	Total USD
One delegate	25,000	4,500	29,500	492
Two delegates	40,000	7,200	47,200	787
Three delegates	55,000	9,900	64,900	1,082
Four delegates	70,000	12,600	82,600	1,377

- **There is a special low fee of Rs 6,000 per participant for state-owned transmission utilities, regulatory authorities, academic institutions and government agencies (not public sector corporates).**
- **Registration will be confirmed on receipt of the payment. To register online, please log on to http://indiainfrastructure.com/conf.html**

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