

POWER TRANSMISSION IN INDIA 2021

Network Growth, Key Developments, Market Opportunities and Projections

- ❖ Report (PDF)
- ❖ Data-set (Excel)

The report will enable you to:

- ❖ Evaluate the growth performance of the sector at interstate and intrastate levels
- ❖ Analyse the developments and trends in the sector
- ❖ Learn about the recent policy and regulatory initiatives and their impact
- ❖ Compare the performance of state transcos on key operational and financial parameters
- ❖ Assess the current and future project pipeline, including TBCB, GEC and cross-border projects
- ❖ Get insights on network development, investment and equipment demand projections
- ❖ Evaluate the market opportunities for developers, contractors, equipment providers and investors
- ❖ Get access to detail profiles of central, state and private transmission companies
- ❖ Gauge the impact of Covid on projects and investments

The power transmission sector is set to attract investment aggregating to Rs 3,040 billion by 2025 as per the National Infrastructure Pipeline. Despite impact of Covid-19 on the sector in terms of project implementation delays, transmission utilities are firming up plans and projects to expand, strengthen and modernise the grid in the wake of increasing renewable energy integration which is projected to reach 450 GW by 2030. The private sector is expected to witness a healthy growth with emerging opportunities through tariff-based competitive bidding of transmission projects while Powergrid and state transcos will continue to dominate the sector. Besides, greater upstream expansion of cross-order networks is expected as the country takes steps to realise the 'One Sun One World One Grid' initiative.

1. Executive Summary

SECTION I: SECTOR ANALYSIS, TRENDS AND RECENT DEVELOPMENTS

2. Sector Size and Growth: Interstate

- ❖ Growth in Transmission Line Length
- ❖ Growth in Substation Capacity
- ❖ Trend in Substation Additions
- ❖ Trends in Network Reliability
- ❖ Growth in Interregional Transfer Capacity
- ❖ Growth in Total Transfer Capacity
- ❖ Impact of One Nation One Grid
- ❖ Capex and Investments

3. Sector Size and Growth: Intrastate

- ❖ Growth in Transmission Line Length
- ❖ Growth in Substation Capacity
- ❖ Trend in Substation Additions
- ❖ Capex and Investments

4. Recent Developments

- ❖ Key Commissioned Projects
- ❖ Projects Awarded in last 12 months
- ❖ Recent M&A Deals
- ❖ Recent Financings
- ❖ InVIT Transactions
- ❖ One Sun, One World, One Grid Initiative
- ❖ New technology initiatives
- ❖ Other Developments (Powergrid's CTU status hive off, Mumbai grid outage, etc)

5. Policy Initiatives

- ❖ MoP Restrictions in Equipment Import and Indigenisation - Impact
- ❖ Draft Electricity LPS Rules, 2020
- ❖ ISTS Charges and Losses Waiver for RE
- ❖ Guidelines for Payment of Compensation for RoW for Lines in Urban Areas
- ❖ Draft Electricity Amendment Bill, 2020
- ❖ Draft SBDs for TBCB
- ❖ Others

6. Key Regulatory Moves and Impact

- ❖ CERC's Sharing of Interstate Transmission Charges and Losses Regulations and Procedures issued by POSOCO
- ❖ CERC's Sharing of Revenue Derived from Utilization of Transmission Assets for Other Business Regulations, 2020
- ❖ CERC order on AGC Implementation
- ❖ CERC's DSM (Fifth Amendment) Regulations
- ❖ CERC's Power System Development Fund Regulations
- ❖ CERC's Recommendations for TBCB Bidding Guidelines
- ❖ Intra-State Reserves and Ancillary Services for Balancing (SANTULAN) (FoR report)
- ❖ FoR's Draft Model Regulation for Intra-State Essential Reliability Services Operations Regulations
- ❖ Update on SAMAST Framework
- ❖ Consolidated First Time Charging Procedures (POSOCO)
- ❖ Market-related Updates (FRAS, SCED, RTM, G-TAM, etc)
- ❖ Recent CEA Guidelines/Procedures

7. Impact of Covid-19

- ❖ Overall Impact on Power Sector
- ❖ Impact of 9 PM 9 Minutes event
- ❖ Impact on Demand and System Operations
- ❖ Impact on Transcos Plans and Capex
- ❖ Impact on Projects and Capacity Addition
- ❖ Impact on Equipment Providers and EPC Players
- ❖ Mitigation Measures by Stakeholders

8. Private Sector Experience

- ❖ Private Participation Experience So Far (Interstate and Intrastate)
- ❖ Status of Projects Awarded through Tariff Based Competitive Bidding
- ❖ Analysis of Recent Bids
- ❖ Projects Under Bidding
- ❖ Future Project Pipeline (Interstate and Intrastate)
- ❖ Issues and Concerns

9. Focus on Renewable Energy Integration

- ❖ RE Growth So far
- ❖ Expected Penetration of Renewables
- ❖ Green Energy Corridors I and II
- ❖ Transmission Scheme for RE Zones by 2022
- ❖ Projects for RE Evacuation (RTM, TBCB)
- ❖ State Initiatives for RE Evacuation
- ❖ Battery Energy Storage Systems
- ❖ Issues in RE Integration
- ❖ Others (REMCs, Grid Operation during Eclipse- POSOCO report)

10. Cross-border Interconnections

- ❖ Current Transmission Links with Neighbouring Countries
- ❖ Recent Developments
- ❖ Interconnections under Implementation
- ❖ Planned Transmission Links
- ❖ Issues and Concerns
- ❖ Way Forward

11. Transmission Tariffs

- ❖ Impact of Sharing Regulations
- ❖ Interstate Transmission Tariffs
- ❖ Intra-state Transmission Tariffs (Long-term and STOA)
- ❖ SLDC Charges

SECTION II: FUTURE OUTLOOK AND OPPORTUNITIES (till 2025)**12. Network Growth and Investment Projections**

- ❖ Growth drivers
- ❖ Projected Line Length
- ❖ Projected Transformer Capacity

- ❖ Projected Number of Substation
- ❖ Expansion in Inter-regional Transfer Capacity
- ❖ Forecasted Investment
- ❖ Issues and concerns

13. Project Pipeline and Market Opportunities

- ❖ Expected Project Pipeline
 - Recently Awarded
 - Under Bidding
 - Proposed/Announced
- ❖ Market Opportunities for:
 - Project Developers and Investors
 - EPC Players and Contractors
 - Equipment Providers

14. Equipment Demand

- ❖ Emerging Technology Trends
- ❖ Projected Equipment Demand
 - Conductors
 - Towers
 - Insulators
 - Transformers
 - Switchgear
 - Reactors

SECTION III: STATE TRANSCO COMPARISON**15. Network Size and Operational Performance**

- ❖ Transmission Line Length
- ❖ Substation Capacity
- ❖ Number of substations
- ❖ Transmission Losses
- ❖ System Availability

16. Financial Performance

- ❖ Revenues
- ❖ Expenditure
- ❖ O&M Costs
- ❖ Net Profit/Loss
- ❖ Capex

17. Future Targets and Capex Plans

- ❖ Network Addition Plans
- ❖ Planned Investments

SECTION IV: KEY PLAYER PROFILES**18. CTU Profile**

- ❖ Power Grid Corporation of India Limited

19. Profiles of Other CPSU Players

- ❖ Damodar Valley Corporation
- ❖ Bhakra Beas Management Board

20. Profiles of State Transmission Utilities

- ❖ Gujarat Energy Transmission Corporation Limited
- ❖ Maharashtra State Electricity Transmission Company Limited
- ❖ Karnataka Power Transmission Corporation Limited
- ❖ Rajasthan Rajya Vidyut Prasaran Nigam Limited
- ❖ Madhya Pradesh Power Transmission Company Limited
- ❖ Uttar Pradesh Power Transmission Corporation Limited
- ❖ Tamil Nadu Transmission Corporation Limited
- ❖ Transmission Corporation of Andhra Pradesh Limited
- ❖ Transmission Corporation of Telangana Limited
- ❖ Haryana Vidyut Prasaran Nigam Limited
- ❖ Odisha Power Transmission Corporation Limited
- ❖ West Bengal State Electricity Transmission Company Limited
- ❖ Punjab State Transmission Corporation Limited
- ❖ Chhattisgarh State Power Transmission Company Limited
- ❖ Kerala State Electricity Board Limited
- ❖ Bihar State Power Transmission Company Limited
- ❖ Assam Electricity Grid Corporation Limited
- ❖ Himachal Pradesh Power Transmission Corporation Limited
- ❖ Jharkhand Urja Sancharan Nigam Limited
- ❖ Jammu and Kashmir Power Development Department
- ❖ Power Transmission Corporation of Uttarakhand Limited
- ❖ Meghalaya Power Transmission Corporation Limited
- ❖ Delhi Transco Limited
- ❖ Tripura State Electricity Corporation Limited

21. Profiles of Private Network Developers and Operators

- ❖ Adani Transmission Limited
- ❖ Sterlite Power Transmission Limited
- ❖ Kalpataru Power Transmission Limited
- ❖ CLP India
- ❖ Sekura Energy
- ❖ Essel Infraprojects
- ❖ Essar Power Transmission
- ❖ L&T Infrastructure Development Projects
- ❖ Techno-Electric & Engineering Company
- ❖ Others

Each key player profile will include data and information on:

- ❖ Growth in transmission network
- ❖ Operational performance
- ❖ Financial performance
- ❖ Future plans
- ❖ Contact details

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Contact details:

Raktima Majumdar

Senior Manager-Information Products
 India Infrastructure Publishing Pvt. Ltd.,
 B-17, Qutab Institutional Area, New Delhi - 110 016, India
 Mobile: +91 8826127521
 Email: majumdar.raktima@indiainfrastructure.com