



पावरग्रिड
POWERGRID

World-Class Integrated
Global Transmission Giant
emPOWERing
green GRID

Powering Tomorrow's Energy Solutions

Transmitting Power, Transforming Lives

About Us

As a leader in the energy transmission sector, **POWERGRID** offers comprehensive solutions that enable the seamless development of transmission networks and the evolution of future energy technologies. With decades of expertise, we bring innovative solutions to power businesses, communities, and the nation.

At a Glance

Transmission
Lines
178975 ckm

Sub-stations
280
Transformation
Capacity
545961 MVA

Operating
Parameters
Availability
>99.80%

Innovation
World's Highest
Voltage
Technology
1200 kV

Telecom
100000 km
fiber optic network
NKN & NOFN
Implementation

As on 30.11.2024

Consultancy Services by **POWERGRID** emPowering Efficient, Reliable, and Sustainable Power Networks

Choosing POWERGRID: Leading the way in Power Transmission Excellence

- Unparalleled expertise in power transmission built over 35 Years
- Extensive experience across diverse power projects
- Commitment to quality, safety, and regulatory standards
- Innovative and sustainable solutions
- Comprehensive end-to-end project management
- Commitment to a greener, smarter energy future
- Customized consultancy to meet unique business needs

With decades of experience in the transmission sector, POWERGRID offers end-to-end consultancy solutions to public & private entities, IPPs, CPSEs and support to MoP in implementation of their flagship developmental projects; enabling them to achieve optimal performance and scalability in their power systems. Our consultancy services combine technical expertise and innovative strategies to drive sustainable infrastructure development and tackle challenges in power transmission and distribution with tailored solutions.

POWERGRID is executing some of the flagship programs of Govt. of India including Comprehensive Transmission & Distribution Scheme in Arunachal & Sikkim worth ₹9,130 Crs., NERPSIP (North Eastern Region Power System Improvement Project) worth ₹ 6,700 Crs., PMDP-15 (Prime Minister's Development Package 2015) worth ₹187 Cr and Smart Metering/ loss reduction works under RDSS (Revamped Distribution Sector Scheme) worth ₹1900 Crs. Around 75 nos. of consultancy assignments are under various stages of execution with

project cost of approx. ₹70,000 Cr in various fields including transmission & sub transmission, design & engineering, EV charging, Renewable etc.

Our Solutions & Services

❖ Transmission Consultancy

Partner with POWERGRID for tailored consultancy services in building, managing, and optimizing transmission networks. Our expertise spans design, development, construction, and management of high-voltage transmission systems.

❖ Engineering Audit and System Studies

Ensure reliability, safety, and efficiency with POWERGRID's engineering audit services. Our team conducts in-depth audits to improve system performance and provide actionable insights

❖ System Automation

Modernize your power systems with cutting-edge automation technologies. POWERGRID offers system automation solutions, monitoring and control to increase resilience and operational efficiency. Solutions cover SCADA (Supervisory Control and Data Acquisition) systems, Substation automation, Real-time monitoring systems & Smart Grid implementation

❖ Capacity Building & Training Programs

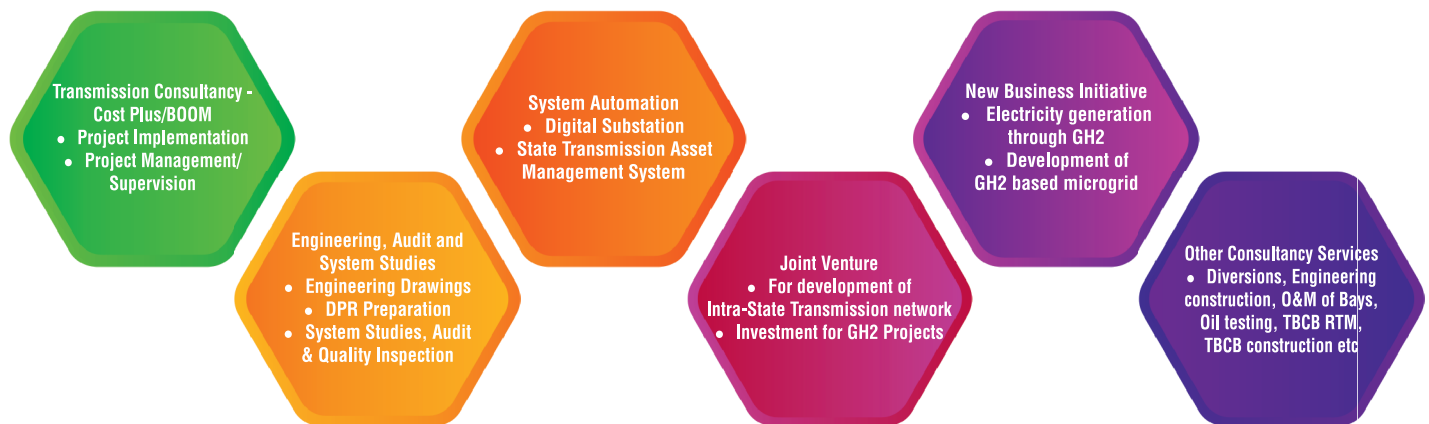
Develop the skills and knowledge with POWERGRID's training programs with customized workshops and capacity-building initiatives



BOOM: Build-Own-Operate & Maintain Model with POWERGRID



Business Categories



POWERGRID's Joint Ventures with State Governments

Driving Collaborative Growth in Power Transmission

As India's leading power transmission company, POWERGRID actively collaborates with state governments through joint ventures (JVs) to develop, expand, and modernize the power infrastructure. We work hand-in-hand with stake holders to develop critical Intra-State transmission networks including Intra-State Grid development, Integration of RE, Smart Grid, System automation etc. These partnerships harness POWERGRID's world-class expertise and financial strength while addressing state-specific energy needs, ensuring efficient, reliable & sustainable power transmission infrastructure and supporting regional economic growth that meets both current and future demands.

Grid efficiency and resilience, bringing the latest innovations in system automation, smart Grids, and renewable energy integration to Joint Ventures.

❖ Focus on Long-Term, Sustainable Solutions

POWERGRID's Joint Ventures are designed to support the long-term growth and sustainability of the state's power infrastructure, ensuring that investments today result in lasting benefits for tomorrow.

❖ Development of State Transmission Networks

POWERGRID partners with state governments to develop robust transmission networks that enhance Grid connectivity and reliability within the state. These collaborations ensure the efficient distribution of power across regions, reducing transmission losses and improving service delivery by

- Strengthening Intra-State transmission networks
- Upgrading existing infrastructure to meet growing demand
- Supporting 24x7 power supply initiatives
- Leveraging advanced technology for Grid efficiency

❖ Integration of Renewable Energy

POWERGRID's Joint Ventures with state governments often focus on integrating renewable energy into the Grid, enabling

Major Strengths

❖ Expertise in Large-Scale Infrastructure Development

POWERGRID's extensive experience in managing high-voltage transmission systems ensures successful project execution, from planning & development to operation & maintenance.

❖ Financial Strength and Investment Capacity

With a strong financial position, POWERGRID provides the necessary investment to fund large-scale transmission projects, alleviating financial constraints for state governments.

❖ Commitment to Innovation and Technology

POWERGRID leverages advanced technologies to improve



states to meet their renewable energy targets. By building transmission infrastructure that supports solar, wind, and other green energy sources, these partnerships promote a sustainable energy future. Integration of RE done by-

- Developing dedicated transmission lines for renewable energy projects
- Supporting state governments in achieving renewable energy targets
- Implementing green corridors to connect renewable-rich states to the national Grid

❖ **Smart Grid and System Automation Initiatives**

In partnership with states, POWERGRID helps modernize transmission networks through the deployment of smart Grid technologies and automation. These initiatives improve Grid reliability, enhance real-time monitoring, and enable efficient energy management across the state's power infrastructure by.

- Implementing SCADA and smart Grid solutions
- Automation of substations and Grid operations
- Real-time data monitoring and control for enhanced Grid performance

❖ **Capacity Building and Knowledge Sharing**

POWERGRID collaborates with state utilities to build local capacity and enhance operational efficiency. Through knowledge sharing

and training programs, POWERGRID ensures state utilities are equipped with the latest technical skills and operational practices to manage the evolving energy landscape by-

- Training programs for state utility personnel
- Sharing best practices in transmission system management
- Collaborating on research and innovation in power transmission

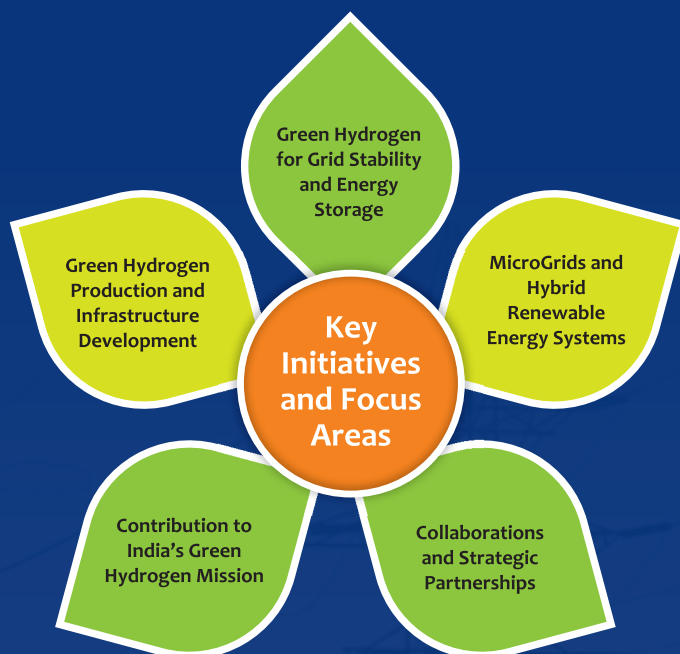
POWERGRID is currently operating 12 Strategic Joint Ventures.

Recent Joint Ventures

- ❶ POWERGRID with Rajasthan Rajya Vidyut Prasaran Nigam (RVPNL) to form JV Company for implementation of Intra State Transmission Projects in the State of Rajasthan with an equity participation of 74% by POWERGRID and 26% by RVPNL. The proposed JV company shall undertake Project worth up to ₹10,000 crores in phased manner.
- ❷ POWERGRID with Bihar State Power (Holding) Company Limited (BSP(H)CL) for implementation of Intra-State Transmission System in the State of Bihar on 50:50 equity participation basis. The Company is implementing Transmission System Strengthening Schemes in Bihar worth about ₹3900 crore.

Business in Energy Transition through **Green Hydrogen**

POWERGRID in Green Hydrogen: Shaping a sustainable energy landscape



As the world moves toward sustainable energy solutions, POWERGRID is at the forefront of the green hydrogen revolution. POWERGRID is leveraging its expertise in energy transmission to integrate green hydrogen into the energy ecosystem and support India's transition to a low-carbon economy.



POWER GRID CORPORATION OF INDIA LIMITED

(A Government of India Enterprise)

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Consultancy Services and Business growth with **POWERGRID** in Power & Energy Sector

Recent Exemplary Consultancy works

- **National Thermal Power Corporation (NTPC)**
Implementation of 400 kV D/C Transmission line from NTPC's Talcher Thermal Power project (TTPS) Stage-III(2X660MW) to POWERGRID's Pandiabili Sub-station for evacuation of 660 MW of power from TTPS Stage-III
- **TUSCO (JV Co. of THDCIL and UPNEDA)**
Consultancy services for construction of two Nos. 220/33kV, 300 MVA pooling sub-stations and transmission lines for evacuation of power from upcoming 600MW UMREPPs at Garautha, Jhansi, UP
- **Ladakh Power Development Department (LPDD)**
Establishment of SLDC-cum-REMC for Ladakh
- **Uttar Pradesh Power Transmission Corporation Limited (UPPTCL)**
Establishment of State Transmission Asset Management System (STAMS) for Remote operation of 331 Nos. EHV substations
- **Odisha Power Transmission Corporation (OPTCL)**
Establishment of State Transmission Asset Management System (STAMS) for Remote operation of 210 Nos. EHV substations
- **REC Power Development and Consultancy Limited (RECPDCL)**
Consultancy services to assess the required type of tower foundation at identified critical locations in UT of Ladakh under PMDP-15
- **Kota Development Authority- Diversion/ modification of 400 kV D/C Transmission Line**
For upcoming Green field airport at Kota (20 km)
- **ISARDADAM-Diversion /modification of 400kV D/C Kota/RAPDD**
Jaipur South Transmission Line (36km)
- **Nuclear Power Corporation of India Ltd (NPCIL)**
Consultancy services for implementation of 400kV interconnection line between Kudankulam Nuclear Power Plant (KKNPP1,2) and KKNPP 3,4 at KKNPP site and miscellaneous substation works at KKNPP 1&2
- **National Thermal Power Corporation(NTPC)**
Consultancy Services for Construction of 132 kV D/C transmission line from Rammam-III HEP to POWERGRID's Rangpo Substation

Build-Own-Operate-Maintain Projects

- LILO of both circuits of Vindhyachal PS – Sasan 400kV D/C line at Hindalco switchyard -on tariff mode
- 400KV D/C Reliance, Jamnagar Oil Refinery Ltd, GIS to RIL – Jamkhambaliya PS along with 2 Nos 400 kV GIS line bays

Recent Joint Venture for Business

- POWERGRID with Rajasthan Rajya Vidyut Prasaran Nigam (RVPNL) to form JV Company for implementation of Intra State Transmission Projects.
- POWERGRID with Bihar State Power (Holding) Company Limited (BSP(H)CL) for implementation of Intra-State Transmission System in the State of Bihar.

New Business in Green Hydrogen

- Establishment of pilot project at POWERGRID Neemrana S/S (Micro grid based) to make auxiliary consumption NET “0”.



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