



POWERING TELECOM



POWERGRID's Overview

- A Maharatna Company
- Incorporated in 1989 for transmitting bulk power across the country
- Central Transmission Utility of India
- One of the largest Power Transmission utilities of the world & operates upto 1200kV AC & 800kV HVDC
- A listed company in India with majority shares owned by Government of India and rest by the public/institutions
- AAA Credit ratings in both domestic and international domain
- Fastest Growing Electric Utility in Asia





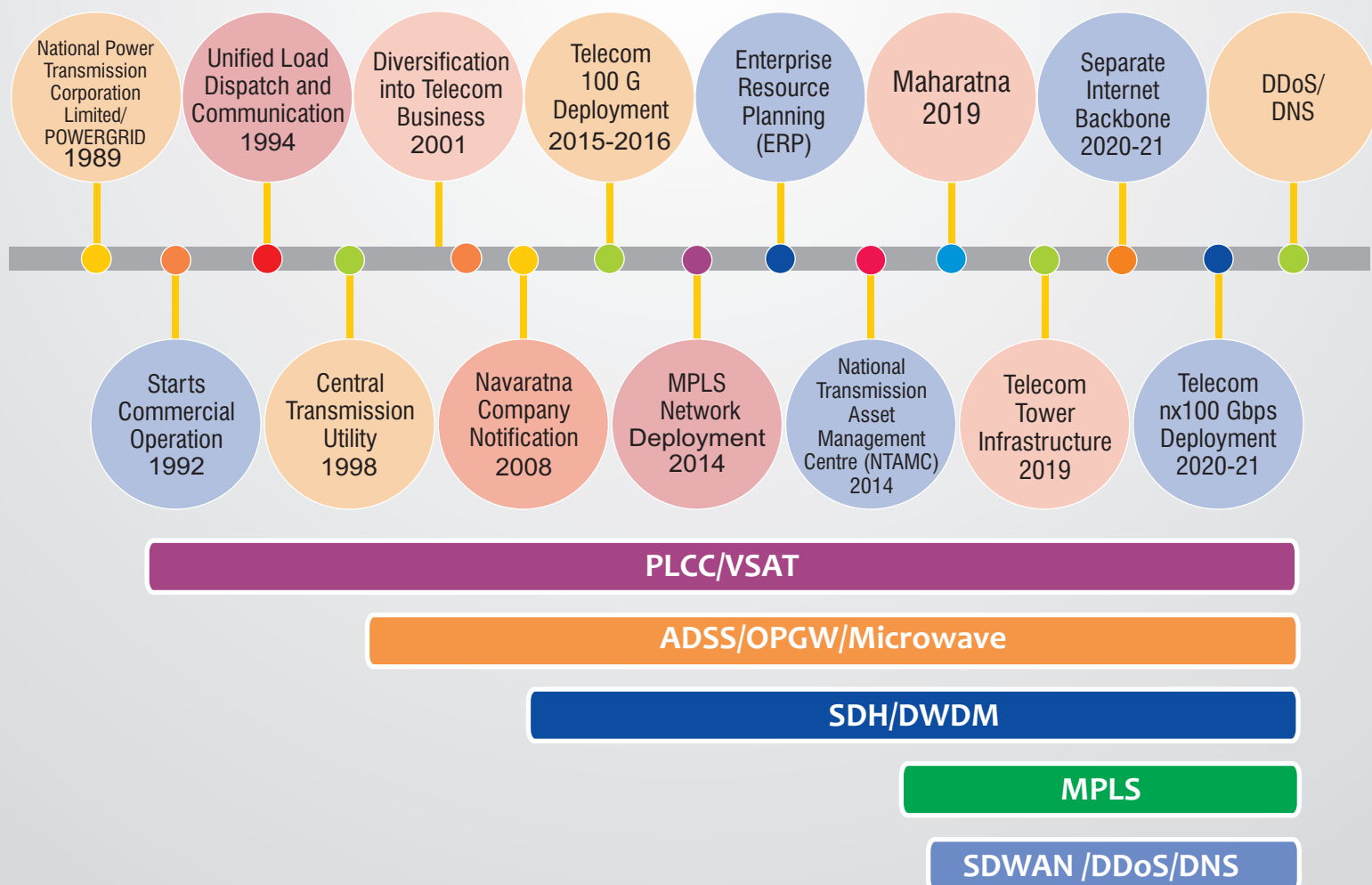
Building Infoways Bridging Distances!

Reach Across all Telecom Circles of India including
remote areas of J&K, Ladakh and NER

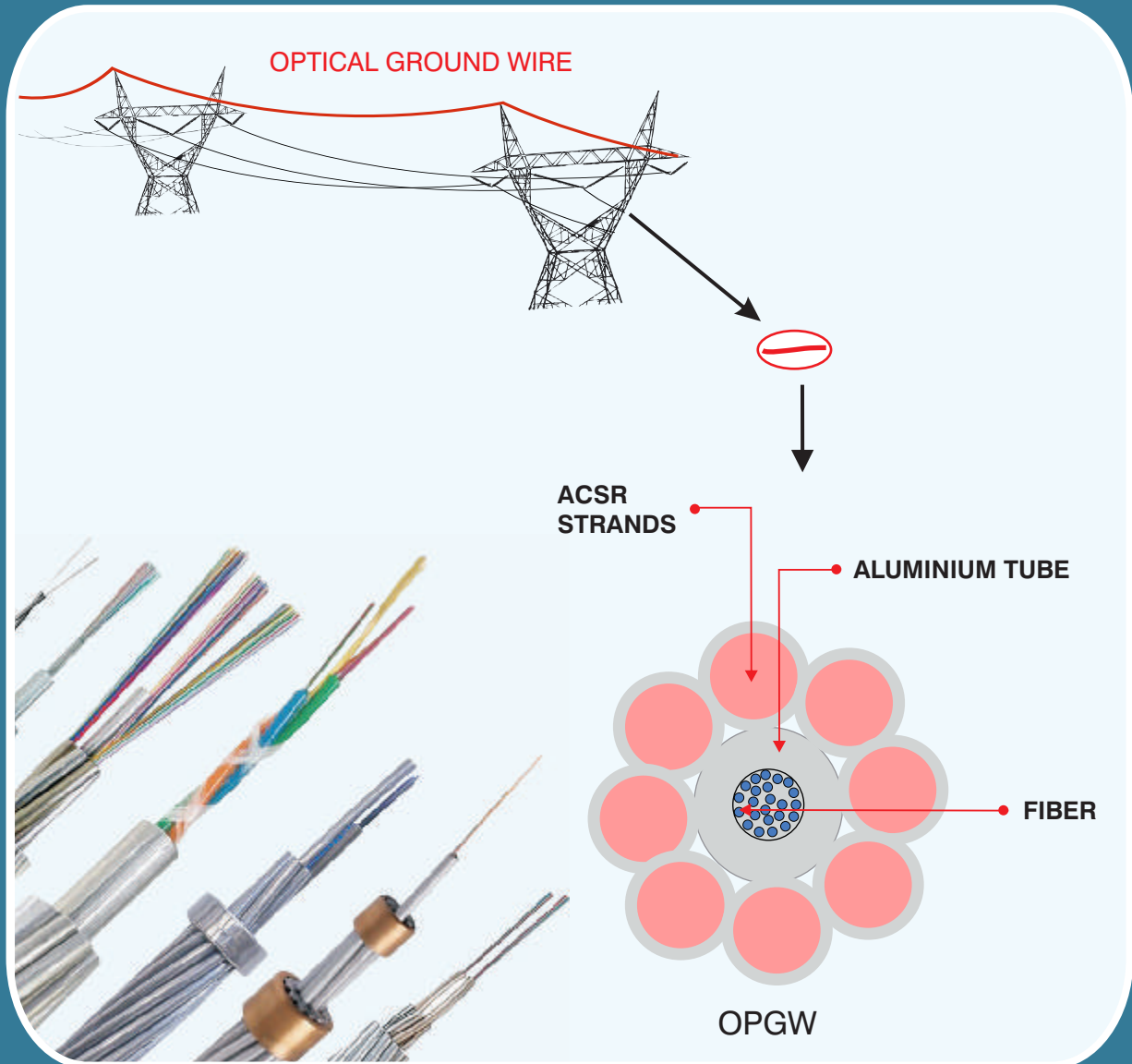


POWERGRID

Telecom Journey so far



True Path Redundancy using OPGW



Network Details

- Total existing Network: 60,946 km
- No. of PoPs: 688
- Cities with Intra-City Network: 105

Telecom Unified License with

- National Long Distance Operator (NLD)
- Internet Service Provider 'A' (ISP)
- Infrastructure Provider – I (IP-I) Registration

POWERGRID

Telecom Network

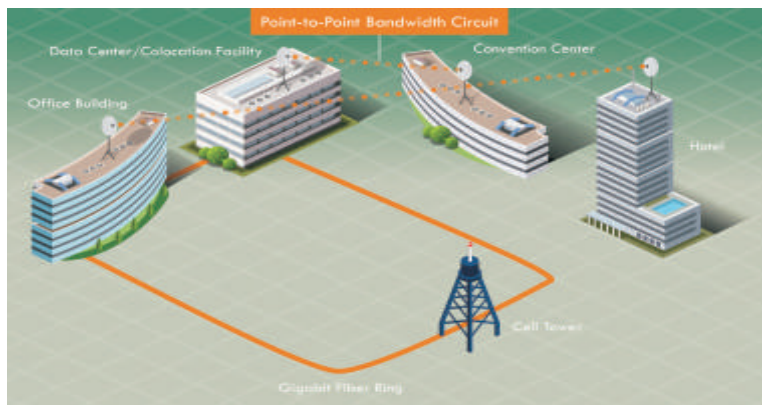


- Only Telecom Service provider in the country having Pan India overhead optic fiber network on its Extra High Voltage transmission lines
- Only Provider with OPGW connectivity to Bangladesh, Bhutan & Nepal
- One of the few to have an excellent reach in J&K, Ladakh and NE states
- Free from cuts, rodent menace and vandalism
- One of the implementing agencies for major Telecom Projects of Govt. of India viz. National Knowledge Network (NKN) envisaging gigantic 3 layer high speed (10 GBPS) Telecom Network connecting major Knowledge centers such as IITs, IISc, NITs, DHQ etc.
- One of the implementing agencies for Bharat Net
- National Transmission Asset Management Centre (NTAMC): POWERGRID has started state of the art computerized control centres NTAMC & RTAMC with associated telecommunication system and adapted substations for enabling remote centralized operation, monitoring and control of POWERGRID Transmission system. The substations and various control centres are being connected by redundant broadband communication network through POWERGRID (Telecom) communication links.
- POWERGRID's Telecom also provides for the connectivity for its own Enterprise Resource Planning (ERP) & e-office.
- Only Telecom Tower Infrastructure Provider allowing to install BTS on Transmission Tower along with completely Green Renewable Power & Fiber connectivity.

Telecom Services

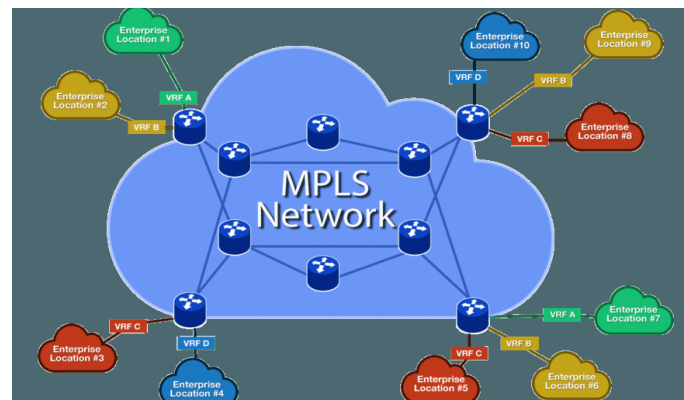
Lease Lines (Point to Point Lease Line)

- SDH/DWDM
- Capacity up to 100 Gbps
- Scalable from present capacity of Gigabit to Terabit
- Backbone Network Reliability of 99.95%+
- Multiple self resilient rings for complete redundancy in backbone as well as intra city access networks



MPLS/VPN

- Three tier architecture with Core, Edge and Access layers
- Dual home connectivity to avoid Single point of failure in Backbone
- Network is designed to cater to real time critical Power Transmission applications
- Layer-2 & Layer-3 VPN technologies to serve all type of connectivity requirements and different Class of Service
- Network is scalable to 500 Gbps in core
- Up to 10G capacity can be provisioned for customer requirements
- Physically Segregated Internet Network for Security of VPN Network & SDWAN



Infrastructure Services

- Dark Fiber on UGOFC
- Co-location services for CDN and other content
- Tower-Space for BTS & Fiber connectivity with uninterrupted Green Renewable Power

Data Services

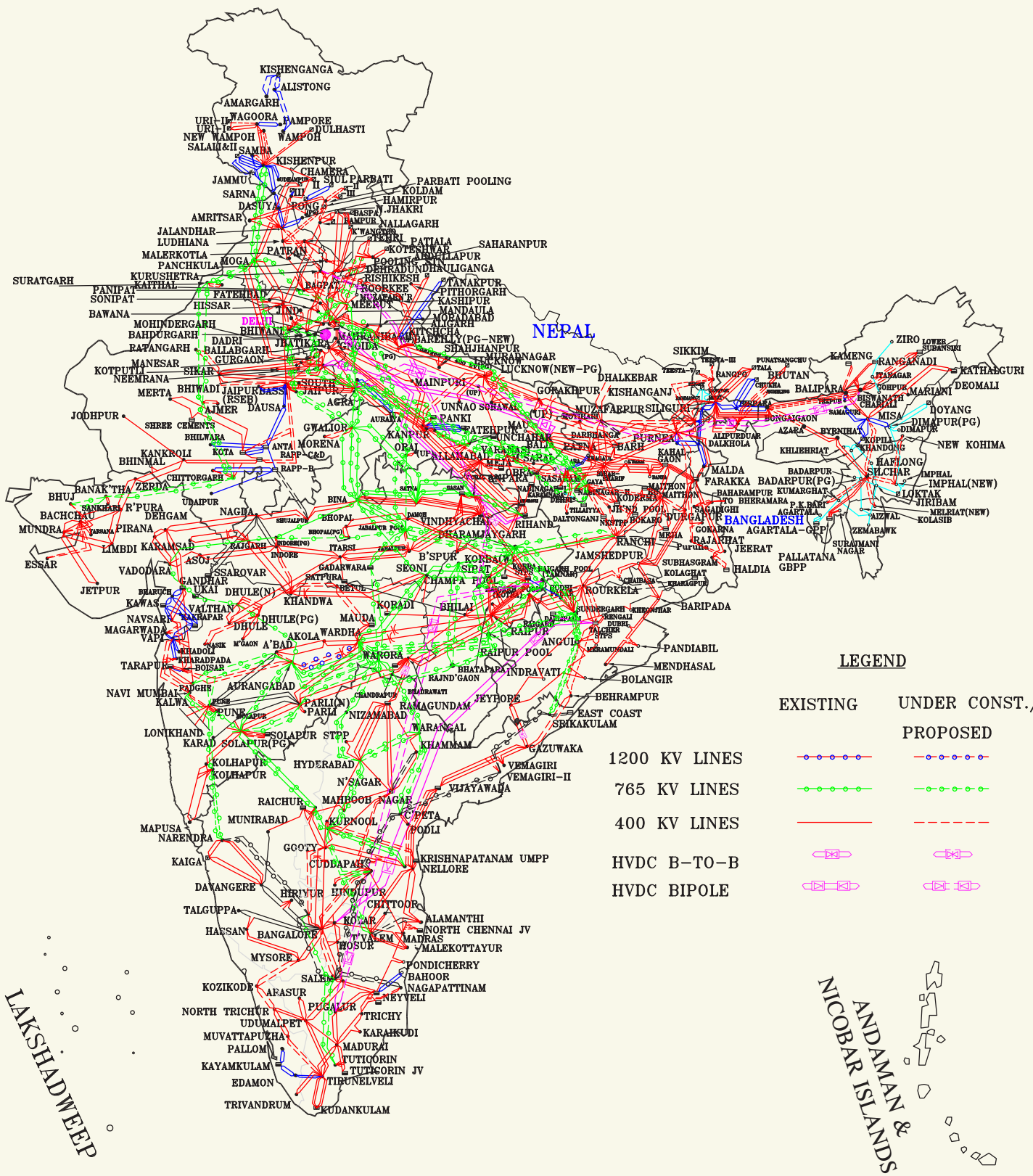
- Internet (1:1) symmetric
- IP Transit
- Layer-2 P2P for data services
- SDWAN/DDoS/DNS

Other Upcoming Services

- Data Center Services
- Video Conferencing
- Communication Services
- ICT for Smart Cities
- VoIP
- Managed Services
- Wi-Fi
- Consultancy

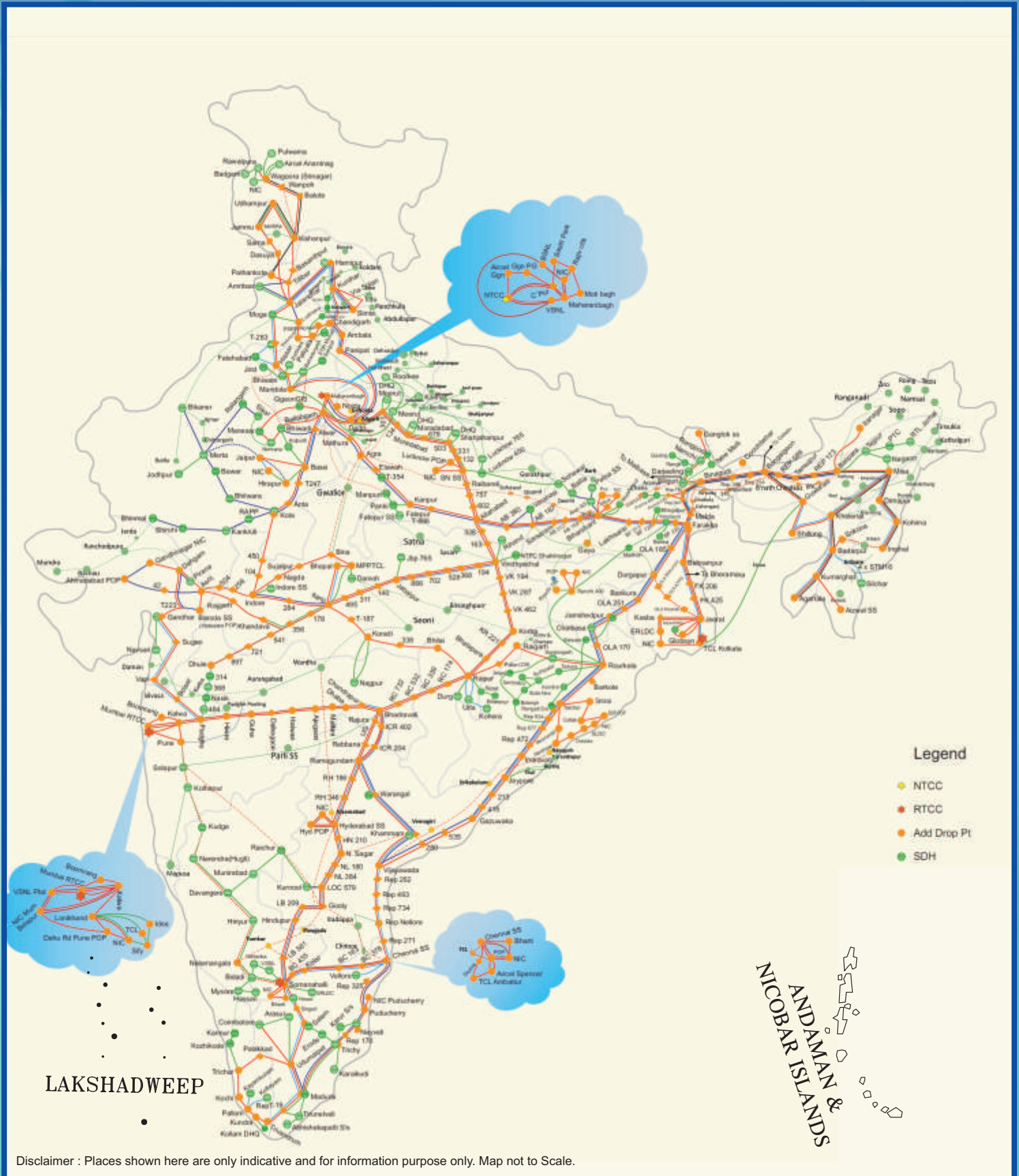


Power Map of India



Disclaimer : Places shown here are only indicative and for information purpose only. Map not to Scale.

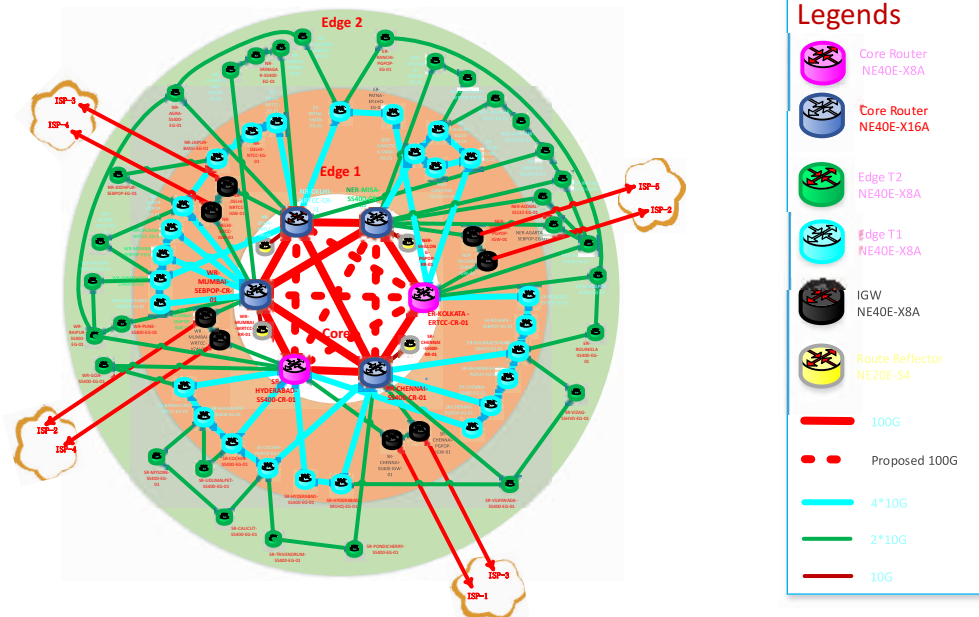
POWERGRID Telecom Backbone



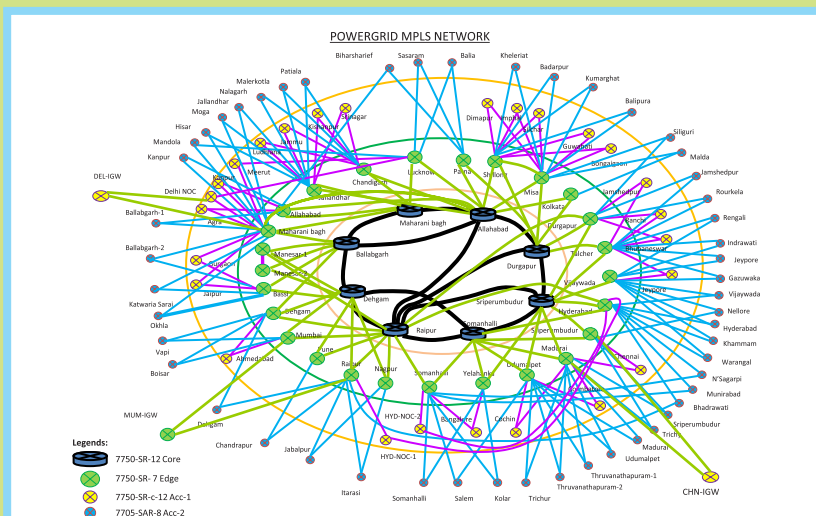
Highly Satisfied Customers



POWERGRID IP Core Network Topology

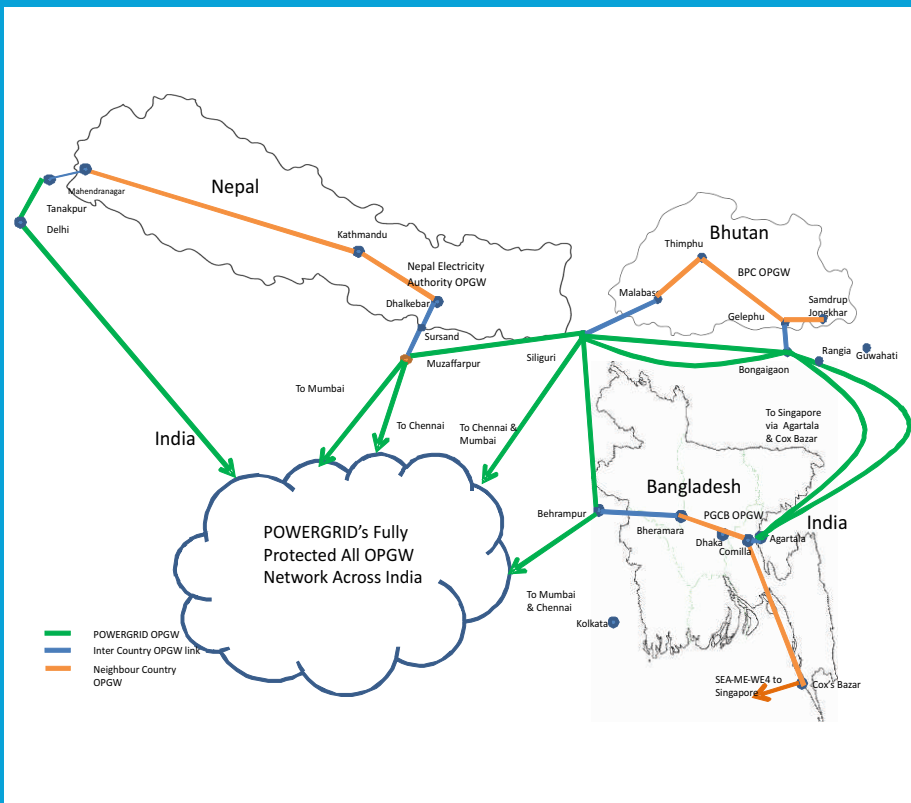


POWERGRID MPLS Network

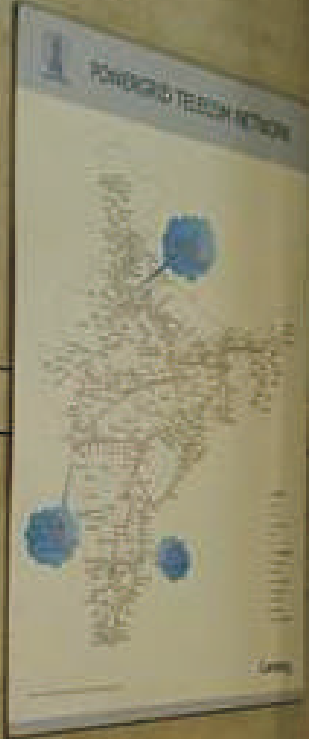


- Three tier architecture with Core, Edge and Access layers
- Dual home connectivity to avoid Single point of failure in Backbone
- Physically Segregated network for Internet & VPN resulting in Best-in-Class security

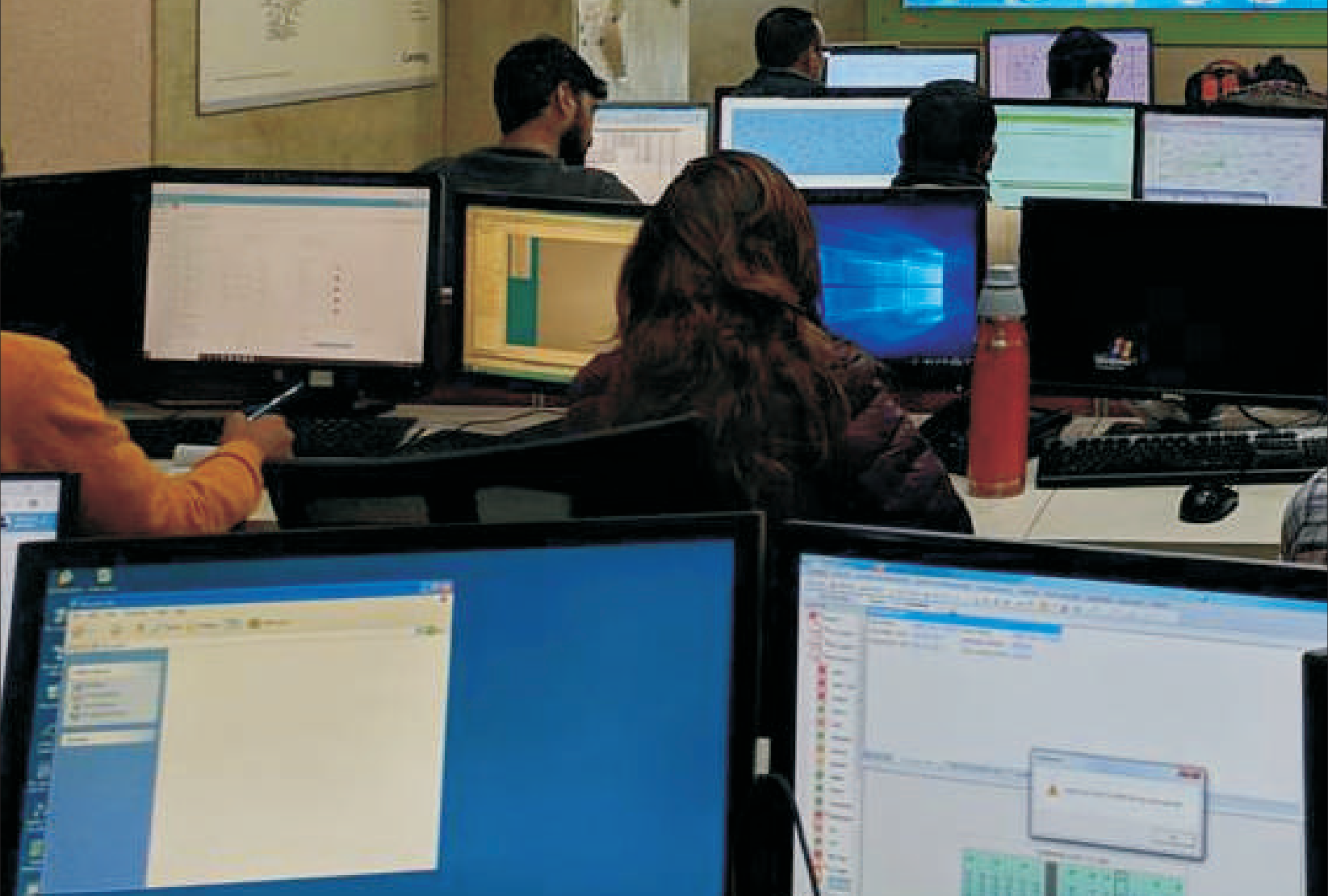
International Connectivity



- POWERGRID is offering domestic leg for International connectivity to neighbouring countries for ILD operators
- Connectivity established to Nepal and Bhutan over OPGW with full redundancy on two different routes.
- Connectivity established to Bangladesh over OPGW
- Exploring Telecom consultancy opportunities in International Market



A large projection of a data table on the wall. The table has multiple columns and rows, with a blue header. The text is too small to read, but it appears to be a technical or financial report.



Network Management System

Main NOC at New Delhi.

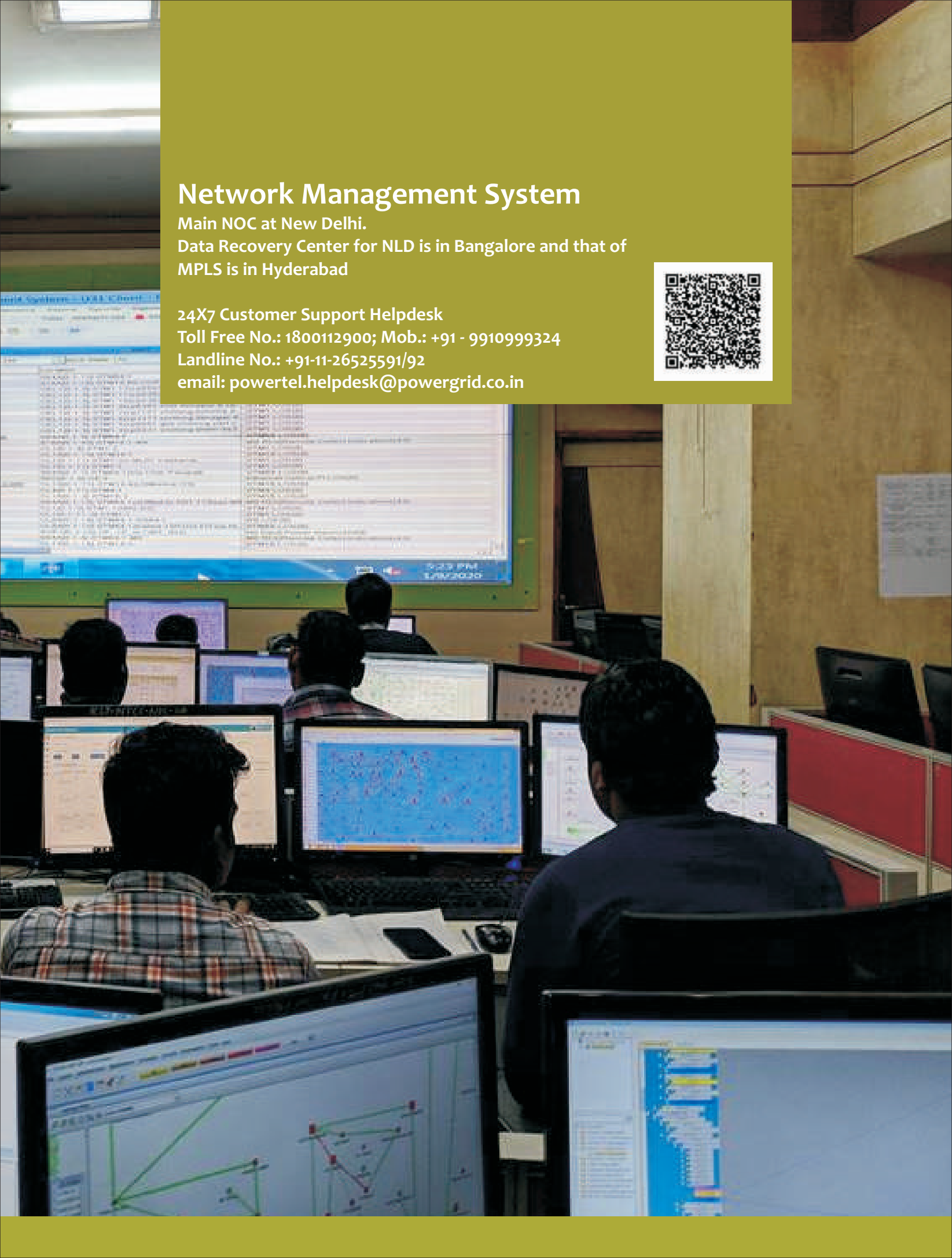
Data Recovery Center for NLD is in Bangalore and that of MPLS is in Hyderabad

24X7 Customer Support Helpdesk

Toll Free No.: 1800112900; Mob.: +91 - 9910999324

Landline No.: +91-11-26525591/92

email: powertel.helpdesk@powergrid.co.in



Contact Details

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www.powergridindia.com
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Chief General Manager (Marketing)
Mobile: +91-9538303012
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Northern Region

(Haryana, Rajasthan, U.P (West), Uttarakhand,
Punjab, Himachal Pradesh, Jammu & Kashmir,
Ladakh, Chandigarh)

Norther Region Head Office
(New Delhi)
Power Grid Corporation of India Ltd.,
Maharani Bagh 400/220 kV
GIS Substation Behlolpur,
Khadar, Opp. ISBT, Sarai Kale Khan,
New Delhi-110013

M.K Pandey
General Manager (NR)
Tel No.: +91-11-26371154
Mobile: +91-9873549082
e-mail: manoj@powergridindia.com

Eastern Region & North Eastern Region

(U.P (East), Bihar, Odisha, Jharkhand,
West Bengal, Assam, Sikkim and North East)

Eastern & North Eastern Region Head
Office (Kolkata)
Power Grid Corporation of India Ltd.,
1st Floor (Telecom Dept.)

CF-17, Action Area-1C,
New Town-Rajarhat,
Kolkata-700156

P.K. Mondol
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Tel No.: +91-33-24235011
Mobile: +91-9434739571
e-mail: pkmondal@powergridindia.com

Western Region

(Madhya Pradesh, Chhattisgarh, Gujarat,
Daman & Diu, Dadra & Nagar Haveli,
Maharashtra and Goa)

Western Region Head Office (Mumbai)
Power Grid Corporation of India Ltd.,
Plot No. F-3, M.I.D.C. Industrial Area;
Near SEEPZ Bus Stand, Marol, Andheri
(East), Mumbai-400093

S.M. Parate
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Mobile: +91 – 9892067783
Email: smparate@powergridindia.com

Southern Region

(Andhra Pradesh, Telangana, Tamil Nadu,
Kerala, Karnataka, Puducherry)

Southern Region Head Office (Bangalore)
Power Grid Corporation of India Ltd.,
Near RTO Driving Test Track
Singanayakanahalli
Yelahanka Hobli
Bangalore-560064
Karnataka

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Platform for Power & BTS



Antennae

Platforms for Power Equipments and BTS



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(A Government of India Enterprise)

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