पावरग्रिड
POWERGRID

2019-21
SUSTAINABILITY REPORT

ONE NATION | ONE GRID | ONE FREQUENCY

VISION

World Class, Integrated, Global Transmission Company with Dominant Leadership in Emerging Power Markets Ensuring Reliability, Safety and Economy

APPROACH TO REPORTING

POWERGRID's commitment to sustainability can be reflected by promoting a holistic approach to corporate reporting that focuses on financial as well as non-financial value creation. The report describes our engagement with our stakeholders, leadership and governance, relationship with communities, delivering reliable services and sustainable investments, focused on Economic, Environmental, Social & Governance aspects. The report has been guided by the GRI principles of accuracy, balance, clarity, comparability, reliability and timeliness.

ABOUT THE REPORT

This 7th Sustainability Report is for the period 2019-21. The previous report was for the period 2017-19, disclosed in September 2020. Our reporting cycle is biennial. The report has been prepared in accordance with GRI Standards (Core).

REPORTING PARAMETERS, SCOPE, BOUNDARY

This report presents our approach towards Economic, Environmental, Social and Governance responsibilities & the progress made in the reporting period 2019-21 beginning 1st April 2019 and ending 31st March 2021. It is recommended that this report may be read in conjunction with POWERGRID's Annual Reports.

The Joint Venture companies have been excluded from the reporting boundary. Wherever we don't have sufficient data capturing systems, computation has been done on the basis of standard assumptions. Required indication of the procedure/ system of data collection has been given at appropriate places in the Environmental, Economic, Governance & Social disclosures. There is no restatement from the last reporting period and the reporting boundary is maintained.

The report details the key material topics for POWERGRID and approach towards addressing each one of them. The information/ data has been gathered from reliable sources like inventories, log books, other records, etc. International Standards like AccountAbility, UK Standard 'AA1000 AP (2018)' and 'AA1000 SES (2015)' have been followed to make the process inclusive, responsive and focused on material/ significant aspects. The report has been externally assured by accredited assurance provider M/s Intertek India Private Limited.

The Sustainability Report from POWERGRID will be released on a regular basis. We welcome any feedback on our approach to sustainability and on our report. You could write in with such feedback or communication to: esmd@powergrid.co.in.

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CHAIRMAN's MESSAGE

It is indeed my pleasure to present POWERGRID's 7th Sustainability Report for 2019-21. The impact of the COVID-19 pandemic is still with us and reminds us all of the fragility of human life and the interconnected life we lead on our planet.

During the reporting period we focused on protecting the health of our employees and ensuring the availability of our transmission network for the proper functioning of the Indian Power Grid with a fair degree of success. In spite of challenges due to restrictions on movement and disruption to supply chains, we were able to timely adopt measures to combat the effects of COVID such as creation of isolation facilities, organizing vaccination camps, supply of medical equipment to hospitals, etc. for the benefit of our employees, contract workers and local communities at different places of our country. With such measures in place, we could provide a safe working environment for all the employees & workers and ensure transmission system availability above 99.5% and also commission more than 12,000 Ckm transmission lines and 65,000 MVA transformation capacity during the reporting period.

The transition to a low carbon economy is accelerating on the back of commitments from governments, and increased awareness in the society at large. The cost of capital is becoming intrinsically linked to a business' sustainability performance and disclosures. Investors and other stakeholders are also laying greater emphasis on Environmental, Social and Governance (ESG) factors in capital allocation and while evaluating the risks and opportunities.

In our endeavor to improve the sustainability of our operations, we have taken up several initiatives during the reporting period. Installation of Rooftop solar panels in 65 locations of 6 MWp has been completed and is being taken up at additional 60 locations totaling to 11 MWp in FY 22. We intend to scale up the sourcing of our electricity consumption from renewable sources in coming years. Considering the high Global Warming Potential (GWP) of SF_6, we are committed to its strict and tight inventory control and our SF_6 gas emissions stand between 0.16-0.19%, well below the prescribed international norms of 0.50%. We are also exploring to replace it with more eco-friendly gas mixture having GWP of less than 1.

Further, it gives me immense pride to inform that concerted efforts of POWERGRID have led to commissioning of World's

1st 400 kV Reactor filled with safer and greener natural Ester Oil instead of regular Synthetic Mineral Oil. On the front of water conservation, in spite of being a non-water intensive industry, we remain committed to water conservation through recycle/ recharge and reuse. At present we are recharging 20% of our total consumption which we intend to increase to 50-60% within next 5 years. As part of our corporate social responsibility activities, POWERGRID is replicating its national award winning project on watershed management in water starved Kalahandi region of Odisha in association with International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), an International Organization helping in bringing soil and moisture conservation to over 1250 acres in phase-1 of the project.

Realizing the importance of climate change and its implication on society and business, in spite of our activities not being carbon intensive, we are continuously looking for opportunities to combat this threat. Our assets are vulnerable to risks associated with the changing climate and its impacts like increased frequency of cyclones, hurricanes, increasing pollution level etc. We have taken several initiatives to combat this threat including strengthening of towers in areas with changing wind profiles, hardening design parameters etc. Towards fulfilment of GoI's target for addition of Renewable energy capacity, POWERGRID is playing a pivotal role for phase wise grid integration of various Renewable Energy Zones in the country through implementation of high capacity green energy highway corridors facilitating access to clean and affordable energy for every household.

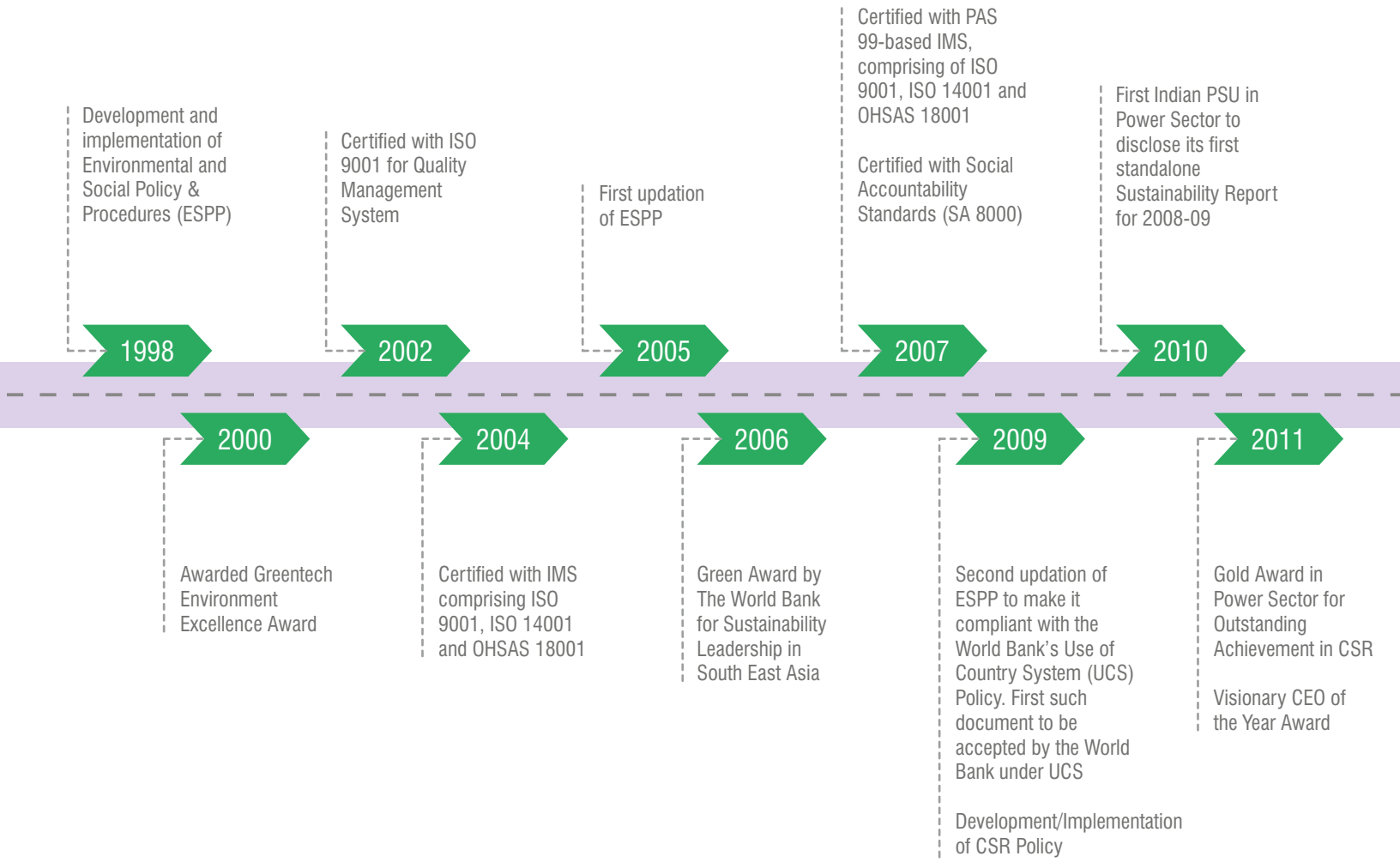
Securing and enhancing livelihoods, ensuring social equity and improving the quality of lives of people form an important aspect of sustainability. Your company is implementing various need-based schemes under its CSR initiatives to improve livelihoods for economically marginalized communities. We have contributed immensely to the community and society by undertaking CSR projects at an approximate cost of ₹ 586 Cr during the reporting period with focus on healthcare, education, sanitation, skill development, rural development, environmental sustainability, etc. Our abiding commitment to serve national priorities is reflected in our contribution of ₹ 200 Cr to the PM CARES Fund to meet the challenges of COVID-19 crisis.

As highlighted in this Sustainability Report, we strongly support the Sustainable Development Goals (SDGs), Principles for Responsible Investment (PRI), Women's Empowerment Principles and other internationally recognized standards and initiatives. We strongly feel that with these our businesses will be able to make a much more constructive contribution in meeting the applicable SDG goals.

I would like to thank my fellow Directors on POWERGRID's Board, the management team and all our employees for playing an active part in POWERGRID's sustainability journey during such testing times. I also appreciate the guidance of our ESPP review committee members for providing appropriate interventions during our reporting process. We stand committed, as always, to creating enduring and sustainable value for all stakeholders. We assure all that we will continue to listen, process, and act on the constructive feedback our stakeholders provide for the betterment of our sustainability journey.

(K. Sreekant)
Chairman and Managing Director

SUSTAINABILITY JOURNEY



2012

- CSR-Corporate Governance Award
- Powerline Award

2013

- Setting up of Waste Paper Recycling Plant, Implementation of Rainwater Harvesting System and Green Building under SD plan
- Disclosed second biennial and externally assured Sustainability Report 2009-11

2014

- Adopted policy to secure land on willing buyer – willing seller basis by avoiding involuntary land acquisition

2015

- Fastest Growing Electric Utility by M/s Platts
- Developed ESPPF for six North Eastern States to achieve the goal of Sustainable Development

2016

- Recognized as one of the India's Best Companies to Work by the Great Place to Work Institute
- 3rd Sustainability Report 2011-13 disclosed

2017

- ADB approved POWERGRID's ESPP as first document in the Asia under Country Safeguard System (CSS)
- "Clean Energy Award, 2016" for Best Power Transmission Utility Company-India by AI Global, UK

2018

- Successful Implementation of CSS
- Disclosure of 4th and 5th Sustainability Report

2019

- Fastest Growing Electric Utility in Asia for five successive years
- 3rd Fastest Electric Growing Utility

2020

- Disclosure of 6th Sustainability Report
- Swachh Bharat Award by Hon'ble President of India

2021

- Fastest Growing Electric Utility in Asia Pacific for 7th successive year
- One of the Best Workplaces in Industrial services by Great Place to Work Institute, India

OVERVIEW

Power Grid Corporation of India Limited (POWERGRID), a **'Maharatna'** Public Sector Enterprise under the Ministry of Power, is involved in bulk power transmission through its Inter-State Transmission system (ISTS) and is one of the largest Power Transmission Utilities in the world. The 'Maharatna' CPSE Status has been conferred by the Government of India (GoI) on 23rd October, 2019 coinciding with the completion of 30 years of incorporation of the Company. Commemorating its new identity as a Maharatna, the Company adopted a new logo which reflects gesture of service to the people & nation, commitment to green energy, sustainability, stability and excellence in technology.

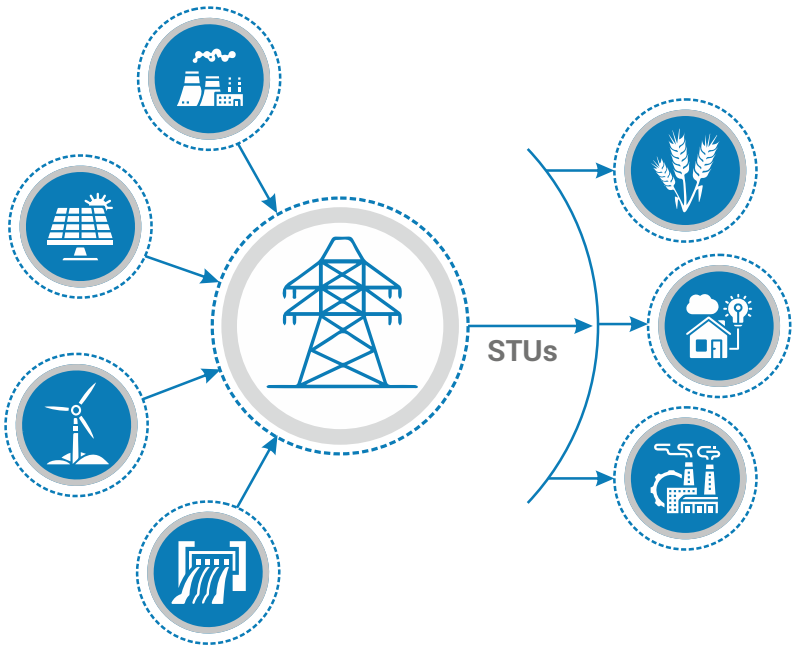
Since its formation in 1989, POWERGRID has contributed extensively to the growth of the country through development and maintenance of a strong, integrated and resilient National Grid. POWERGRID's commitment as a dependable entity is evident from the fact that we have exceeded most of the performance targets agreed upon in the annual MoU signed with the Ministry of Power (MoP), GoI and have always achieved Excellent rating from MoP for its performance since 1993-94 (first MoU with MoP).

'Fastest Growing Electric Utility in Asia Pacific' for 7th successive year under Platts top 250 Global Energy Company Rankings 2020 and globally positioned as the 4th fastest growing electric utility

Best Workplaces in Industrial services for 2020 by Great Place to Work Institute

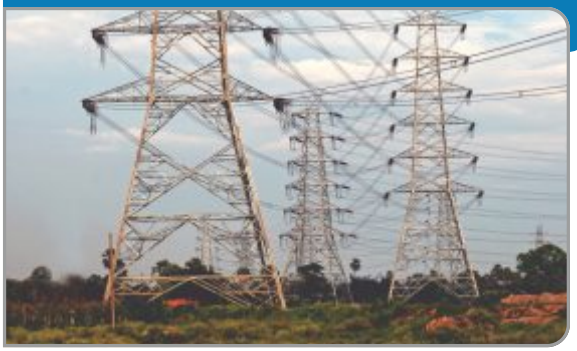
GREENTECH Corona Warrior Award 2020 for COVID response

POWERGRID'S PRESENCE IN POWER SECTOR



BUSINESS SEGMENTS OF POWERGRID

TRANSMISSION



- Transmission Systems for CGSs, IPPs, UMPPs and Renewable Energy Integration
- Grid Strengthening Schemes
- Inter-state, Inter-regional and International Links
- Green Energy Corridors
- Transmission Schemes for Ultra Mega Solar Power Parks
- High Capacity Transmission Corridors for IPP Projects

CONSULTANCY

- In-house expertise in various facets of transmission, sub-transmission, distribution and telecom
- Provides services to both National and International Clients including SAARC regions
- Providing consultancy for implementation of Smart Grid Pilot Projects, Energy Efficiency & Energy Audit
- Implementation of Intra-state transmission network
- Building knowledge base in Transmission Sector through Capacity Building programs

TELECOM

- Telecom business under Brand Name 'POWERTEL'
- Range of services under Unified License as National Long Distance (NLD) and Internet Service Provider –Category 'A' (ISP-'A') Service authorizations
- Neutral carrier in the point to point Bandwidth Leasing Business (DLC)
- Enterprise Services: MPLS VPN & Internet Services with built-in Quality of Service (QoS) and Class of Service (CoS) SLA parameters

NEW BUSINESS OPPORTUNITIES

- Distribution, Energy Efficiency & Audits
- Smart Grid & Smart City
- Grid Scale Battery Storage
- Pilot projects (eV charging infrastructure)
- Dedicated Transmission System for Railways & other bulk users

TRANSMISSION

As on March 31st 2021, POWERGRID owns and operates **1,70,685 Ckm (1321 lines)** network of transmission lines, **4,37,523 MVA** transformation capacity and **261** EHVAC & HVDC substations

90,090 MW cumulative inter-regional power transfer capacity

During 2019-20, POWERGRID commissioned **4,984 Ckm** of EHV transmission lines and **37,987 MVA** transformation capacity with **3** new substations

During 2020-21, POWERGRID commissioned **7,403 Ckm** of EHV transmission lines and **27,624 MVA** transformation capacity with **13** new substations

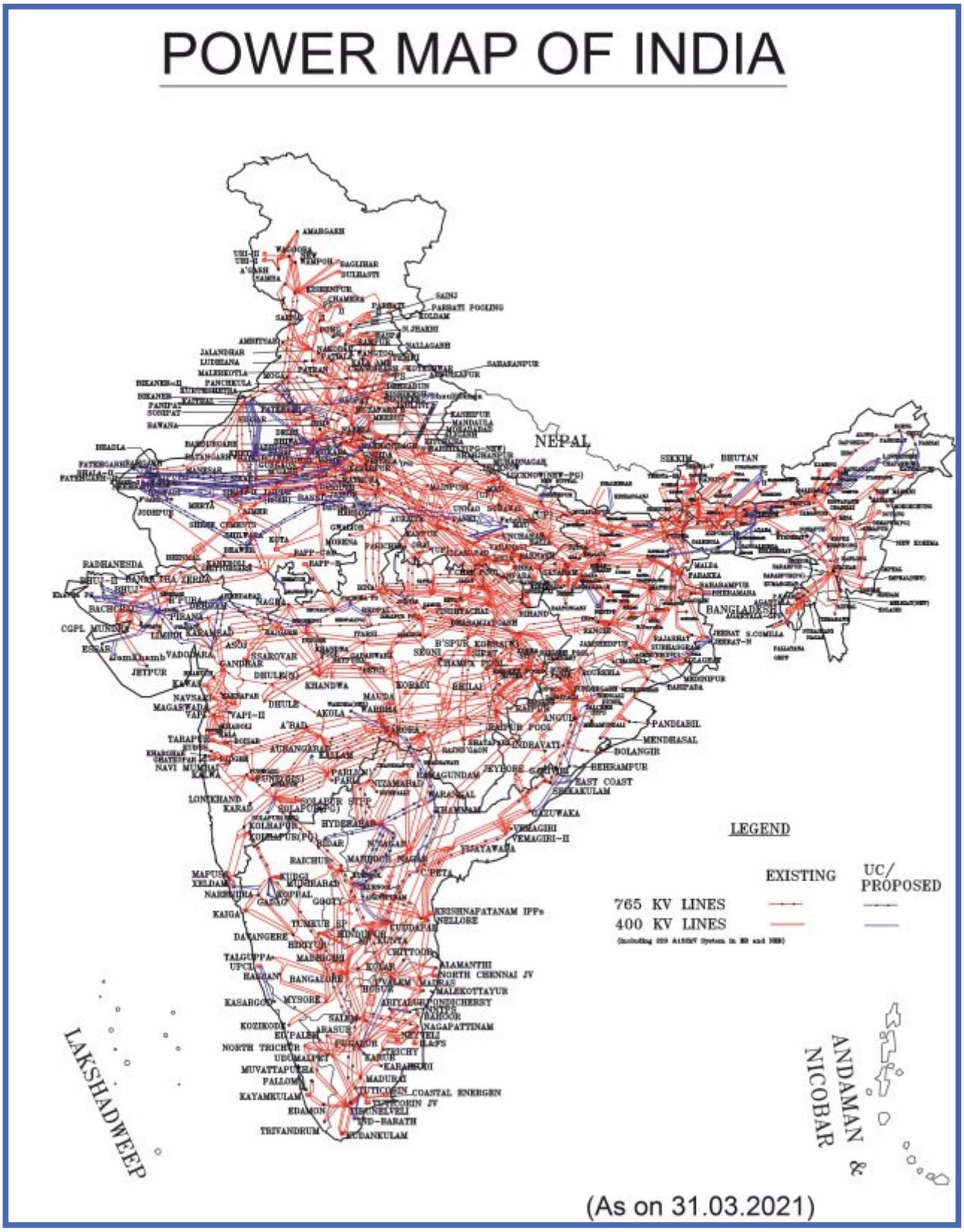
POWERGRID's business model is primarily focused on Transmission business segment. POWERGRID's technological interventions and project management techniques have received global recognition at various forums.

Being the Central Transmission Utility (CTU) of the country during the reporting period, POWERGRID is associated with planning, implementation, coordination, control and supervision of the Inter-State Transmission System. It ensures that there is an efficient, economic and well-coordinated system for the development of inter-state transmission lines while ensuring smooth flow of electricity from Generating Stations to the Load Centres. It provides non-discriminatory open access to Inter-state transmission system for use by all licensees or generating companies. Being a power infrastructure company, POWERGRID's growth & stakeholder's investments are directly linked to the efficient implementation of transmission projects. Having implemented many challenging transmission projects traversing hundreds of kilometres across difficult terrains and mitigating various environmental & socio-economic issues, POWERGRID has managed to uphold its effort for transmission of electricity to every corner of the country. Efficient implementation of transmission infrastructure is ensured by administering various project management tools like Enterprise Resource Planning (ERP), Integrated Project Management and Control System (IPMCS) etc.

Development of the National Grid: To further strengthen **'One Nation-One Grid-One Frequency'**, a number of inter-regional transmission lines were commissioned during the reporting period. Some of the important links commissioned during the reporting period include 800 kV HVDC Raigarh-Pugalur Inter-regional link, 400 kV D/c Hiriyur-Mysore associated with Ultra Mega Solar Parks, 765 kV D/c Ranchi-Medinipur Inter-state project, Lines associated with Jawaharpur Firozabad Intra-state project, etc. As on 31st March 2021, the inter-regional power transfer capacity of the transmission assets was 90,090 MW and inter-regional power transfer capacity of the National Grid was 105,050 MW.

Open Access: As of March 31st 2021, POWERGRID has granted connectivity to 742 eligible applications for a quantum of about 3,00,324 MW and Long-Term Open Access (LTOA) & Long-Term Access (LTA) to 313 applications for a quantum of about 1,24,653 MW. Based on the Transmission capacity margins available, Medium Term Open Access (MTOA) has also been granted to 158 applications of quantum of about 17,248 MW.

POWERGRID has deployed state-of-the-art technologies for effective implementation of transmission projects which include development of multi-circuit towers, pole type towers, use of drone for survey, etc.


POWER MAP OF INDIA
NEPAL
BHUTAN
SIKKIM
BANGLADESH
LEGEND
EXISTING
UC/ PROPOSED
765 KV LINES
400 KV LINES
LAKSHADWEEP
ANDAMAN & NICOBAR
(As on 31.03.2021)

Not to Scale

TELECOM

Range of services under Unified License as National Long Distance (NLD) and Internet Service Provider – Category 'A' (ISP-'A') service authorizations including point-to-point leased line bandwidth services, Internet Leased line, Tower co-location, MPLS based IP-VPN, SD-WAN, DDoS etc. in all parts of the country through its Pan India high capacity network

Telecom Network Availability
99.97% in 2019-20 & **100%** in 2020-21

Received approval from GoI & CERC for formation of wholly owned subsidiary Company for Telecom business

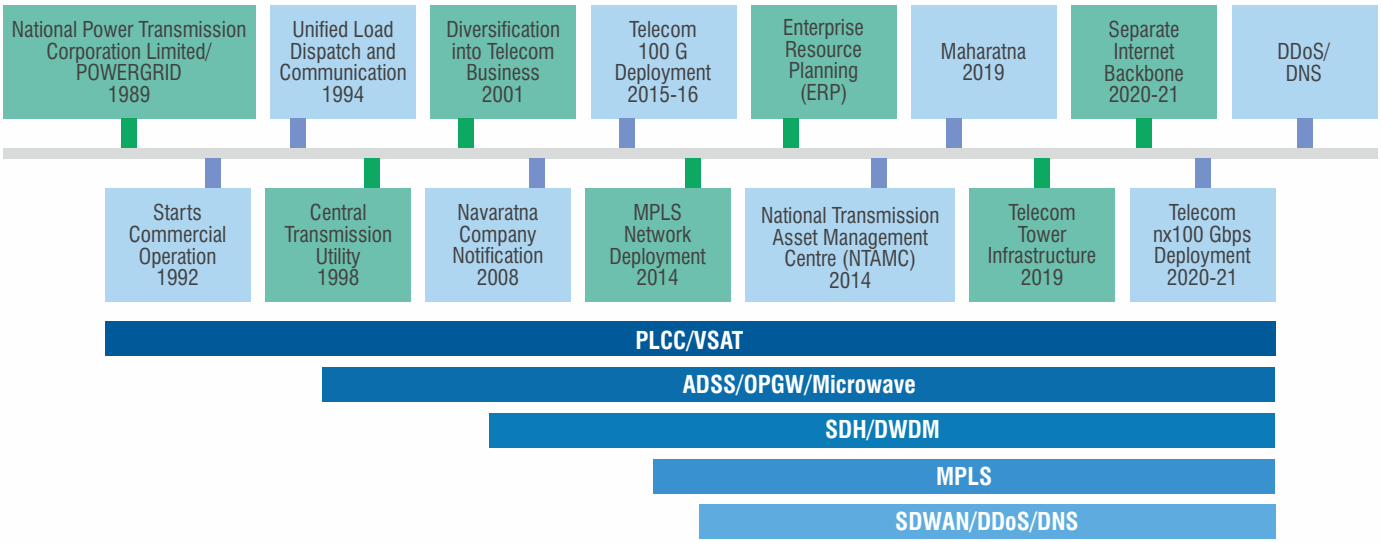
POWERGRID has leveraged its state-of-the-art transmission infrastructure to contribute to the telecommunication landscape of the country through "POWERTEL". POWERTEL is providing a range of services under its Unified License as National Long Distance (NLD) and Internet Service Provider – Category 'A' (ISP-'A') service authorizations including point-to-point leased line bandwidth services, Internet Leased line, Tower co-location, MPLS based IP-VPN, SD-WAN, DDoS etc. in all parts of the country through its Pan India high capacity network. To increase its network reach for business opportunities, POWERGRID is also partnering with last mile connectivity providers, transmission utilities and state electricity utilities for RoW, fiber leasing, etc.

POWERGRID has developed a strong portfolio of clients in diverse businesses including Central and State Governments, CPSEs, private sector entities, global and domestic IT companies etc. Apart from point-to-point leased line bandwidth services, internet services, we are also catering to customers in the enterprise segment by providing Virtual Private Networks (VPN) up to 10 Gbps connectivity on its Multi-Protocol Label Switching (MPLS) cloud.

As on Mar'21, POWERGRID's telecom network coverage is 71,673 km. POWERGRID extended support to its clients during the COVID-19 lockdown period by ensuring quick response to their upgradation and other customer service requests.

POWERGRID is one of the implementing agencies for 'Bharat Net' Phase-I project envisaged to provide broadband connectivity to Gram Panchayats (GPs), thus making valuable contribution to the initiatives of the GoI for Digital India. We have laid OFC for 10,739 GPs by the end of 2020-21, out of 10,838 GPs allotted to the Company by Bharat Broadband Network Limited (BBNL) under Phase-I spread across 39 districts in 5 States viz., Andhra Pradesh, Telangana, Himachal Pradesh, Jharkhand & Odisha.

To provide a green and clean solution, POWERGRID is exploring the use of its existing transmission towers to provide power to the associated telecom equipments placed on the towers.



CONSULTANCY

Consultancy Assignments in
21 Countries

61 New Domestic Consultancy Projects

09 New International Consultancy Projects

Signing of Cooperation Agreement with Africa50

POWERGRID offers techno-managerial consultancy services in the fields of transmission, sub-transmission, distribution management, load dispatch and communications, smart grid etc. POWERGRID has developed expertise in its core areas such as power transmission, sub-transmission system, distribution management, load dispatch & communications, in India and abroad. Leveraging its capacity and experience, consulting services have been provided to a number of customers in India and worldwide.

POWERGRID is implementing two important projects for strengthening of the Intra-State Transmission and Distribution Systems (33 kV and above) namely 'NERPSIP' in Manipur, Meghalaya, Mizoram, Tripura, Nagaland & Assam and 'Comprehensive Scheme' for strengthening of Transmission & Distribution in Arunachal Pradesh and Sikkim.

POWERGRID is also associated with the implementation of various projects for the Indian Railways. Some of the successfully completed projects are electrification of Pune-Shindwane and Miraj-Kolhapur sections under the Railway Electrification assignments of the Indian Railways. POWERGRID has bagged many domestic consultancy assignments of clients such as THDC, OPTCL, Lanco Teesta Hydro Power Ltd., Rewa Ultra Mega Solar Ltd., Tripura State Electricity Corporation Ltd., UPPTCL, etc.

On the International front, POWERGRID has been providing services to customers in over 21 countries. POWERGRID is also maintaining its leadership in the proposed cross-country grid involving SAARC nations. It has strengthened its ties with the neighbouring nations of Bangladesh, Bhutan and Nepal establishing interconnections and mutual exchange of power. This can be seen in the projects being undertaken in order to increase the connectivity between these countries. POWERGRID is under discussions with Africa50, which is an investment platform owned by 28 sovereign Governments in Africa and two Central banks & African Development Bank for investments in building transmission assets in Kenya under Public-Private Partnership (PPP) model through a joint venture.

During the reporting period, POWERGRID completed many prestigious projects both on International and National fronts which include the three transmission lines & one substation for Jharkhand Urja Sancharan Nigam Ltd., 400 kV line associated with Punatsangchu I & II Hydro Electric project in Bhutan.

OPERATIONAL EXCELLENCE

Transmission System Availability

2019-20	2020-21
99.82%	**99.78%**

Our operational excellence lies in management and maintenance of vast transmission network through meticulous planning and strict adherence to norms/processes. Our Systems, processes and procedures are aligned with Integrated Management System as per Publicly Available Specification, PAS 99:2012 integrating requirements of ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environment Management System) and ISO 45001:2018 (Occupational Health & Safety Management System), Social Accountability Standard SA:8000, Energy Management Systems ISO:50001 and Information Security Management Systems ISO:27001.

High level of transmission system availability is maintained over the years through state-of-the-art maintenance activities and technologies such as thermo-vision scanning, corona camera, high resolution video, digital camera, application-based monitoring of transformers, reactors and patrolling of lines & real time updation of data through online applications for effective monitoring of assets etc. Furthermore, various air-borne techniques like aerial patrolling of transmission lines by helicopters and Unmanned Aerial Drones are also deployed to maintain proper functioning of lines even in the remotest of areas/ difficult terrains. Proactive maintenance management practices monitored through a web-based dashboard for Annual Maintenance Plan has helped to achieve high operational performance of its large and highly complex transmission asset network despite the COVID-19 pandemic. POWERGRID is also undertaking internal benchmarking on key performance indicators to evaluate operational performance to identify gaps for improvement, share key initiatives and achieve optimum operational performance.

To facilitate remote operation of transmission system and monitoring of various parameters on real time basis at regional and national levels, NTAMC was set up at Manesar, near Gurugram, Haryana and RTAMCs were set up at various locations across the country. These state-of-the-art centres are manned round-the-clock by experts for effective monitoring and management of transmission assets. Remote management of Substations has proved to be immensely beneficial during the reporting period to ensure uninterrupted supply of power despite COVID-19 pandemic. As on March 2021, total 242 Substations are being operated remotely from these asset management centres.

In an event of Natural disasters, our state-of-the-art 'Emergency Restoration System' is deployed for immediate restoration of the collapsed transmission lines. This was evident in the prompt support that was extended in May 2019 when “FANI”, one of the strongest cyclones in Bay of Bengal in the last 20 years, hit the State of Odisha, which caused massive damage to power transmission/ distribution systems in the State, especially in the districts of Puri, Bhubaneswar and Cuttack. Based upon the inputs of India Meteorological Department (IMD), POWERGRID took preparatory steps before the onset of cyclone which helped to mitigate the impact and quickly restore the affected transmission elements. Further, full support was provided to the transmission and distribution utilities of the State through men and material for early restoration of their damaged transmission and distribution network.

RENEWABLE ENERGY INTEGRATION

Govt. of India has set target to achieve RE target of 445 GW, more than 50% share of planned generation capacity (817 GW) by year 2030 to address climate change and sustainability. By December 2022, the country has set a target of 175 GW renewable capacity. To achieve this, a comprehensive transmission scheme for 66.5 GW with estimated cost of ₹ 36,000 Crore was evolved for integrating renewable energy zones in the states of Tamil Nadu, Andhra Pradesh, Karnataka, Gujarat, Maharashtra, Rajasthan and Madhya Pradesh. Further, in order to tap abundantly available renewable energy potential (Solar & Wind) in UT of Ladakh, Hon'ble Prime Minister of India in his Independence Day Speech on August 15th, 2020, announced development of solar energy park in Ladakh. Taking this forward, feasibility assessment of transmission system for evacuation of 10 GW project (5 GW each in Pang and Nyoma regions of Leh) has also been carried out & detailed project report for the same has been prepared & is presently under consideration by GoI. In line with the ambitious targets of 175 GW installed capacity of renewable energy by 2022, POWERGRID has implemented Green Energy Corridors (GEC) - Inter-State Transmission System (ISTS) at 765 kV & 400 kV level as well as its control infrastructure comprising forecasting of renewable generation, dynamic compensation, establishment of Renewable Energy Management centres (REMC) at SLDCs/ RLDCs/ NLDC level, etc.

To enable forecasting of renewable resources and efficient management of intermittent renewable generation, the Company, on behalf of GoI, has already established 11 nos. of dedicated Renewable Energy Management Centres (REMC) located at the renewable rich State Load Despatch Centres such as Rajasthan, Madhya Pradesh, Gujarat, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh as well as respective Regional Load Despatch Centres in Northern Region, Western Region, Southern Region and National Load Despatch Centre. These centres are equipped with forecasting tools, renewable energy scheduling tools as well as real time monitoring of renewable resources. In addition, 2 more REMCs, one at Telangana and other at South Andaman are under implementation.

NEW BUSINESS OPPURTUINITES

In line with GoI E-mobility mission towards lowering vehicular pollution and to ensure energy sustainability, POWERGRID has been using e-vehicles for its day to day official transportation. POWERGRID is also developing Electric Vehicle (EV) Charging Stations across India & is operating 16 public EV charging stations at Delhi, Gurugram, Hyderabad, Ahmedabad, Bengaluru, Kochi & Kozhikode. Work on additional 24 public EV charging stations is in progress in Delhi, Bengaluru, Mysuru and Shillong. POWERGRID is developing 11 EV charging stations in Shillong under the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) India scheme phase-II. Discussions are in progress with various Municipal Corporations, DISCOMs, Metro Rail Authorities etc. for expanding Energy Vehicle Charging Station network.

Realizing the significance of energy saving aspect for sustainable development, POWERGRID is pursuing business opportunities in energy saving by way of conducting energy audits and implementation of Energy Efficiency & Sustainable development projects in various Govt. as well as private agencies, e.g. industries, institutions, commercial establishments, State Transmission Utilities, etc. POWERGRID is a BEE Grade-I Energy Service Company (ESCO) for investing /implementing energy efficiency projects and has a large pool of certified energy auditors/ energy managers who are well qualified to offer energy efficiency solutions. During the reporting period, POWERGRID signed MoU with IIT (Roorkee), NIT (Warangal) & Energy Management Centre (Kerala) for long term association in the area of Energy Efficiency and Sustainable Energy. POWERGRID has also signed an MoU with CSIR-NEERI for facilitating setting up of Waste to Energy plants, and Solid Waste Management etc. in various establishments.

TECHNOLOGY DEVELOPMENT

POWERGRID's technology development initiatives and interventions have always been focused on creating environment-friendly transmission systems to improve the efficiency in power transmission that has encouraged us to adopt state-of-the-art technologies to overcome the challenges associated with the establishment of high capacity power transmission corridors.

POWERGRID being a responsible corporate entity addresses any residual environmental or social impacts associated with its business following the principles of Avoidance, Minimization and Mitigation as outlined in its Environmental and Social Policy & Procedure (ESPP). We leverage the role of technology by not only adopting the existing modern technological tools and technologies developed in different parts of the world but also emphasize on in-house technology development meeting the national requirement.

We work towards creating value sustainably for the economy, environment as well as for the society by accepting and applying the various advancement in technologies and finding solutions to meet future challenges. This drive is focussed at reducing transmission losses and optimising Right of Way requirements for establishing transmission corridors as well as reducing land requirements for construction of substation.

In this direction, major projects undertaken/ under implementation are POWERGRID Advanced Research & Technology Centre, Intelligent Condition and Asset Monitoring Systems, Resin Impregnated Paper bushings, Digital Substation, etc. POWERGRID invested ₹ 9.54 Crore and ₹ 4.55 Crore in Research & Development activities during 2019-20 and 2020-21 respectively.

CORPORATE GOVERNANCE

Ranked 2nd amongst Indian PSUs in Forbes 'The World's Best Employer 2020 List' &
Globally positioned as the 305th in the World's Best Employer 2020 List

Recognized as one of the Best Workplaces in Industrial services for 2020 by Great Place to Work Institute, India

POWERGRID's commitment to transparency and accountability is focused towards its vision of being a "World Class, Integrated, Global Transmission Company with Dominant Leadership in Emerging Power Markets Ensuring Reliability, Safety and Economy". Our Corporate Governance is aimed at promoting corporate fairness, transparency and accountability in the best interest of various stakeholders in a Company. POWERGRID is following the Guidelines on Corporate Governance issued by the Department of Public Enterprises, GoI besides adhering to the provisions of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

The corporate governance structure specifies the distribution of duties, rights, responsibilities and powers among different participants in the company. All strategic decisions regarding investment, diversification, procurement, commercial and finance are implemented after approval by the Board.

It a matter of great pride and achievement that POWERGRID has been conferred with the coveted "Maharatna" Status by the GoI in Oct' 19. Such status allows POWERGRID more flexibility and autonomy in terms of making investments and operational decisions. The Board of Directors of POWERGRID has been delegated powers by the GoI to incur capital expenditure on purchase of new items or for replacement without any monetary ceiling, enter into technology joint ventures or strategic alliance, organisational restructuring, etc. The ceiling on equity investment to establish joint ventures and wholly owned subsidiaries in India or abroad is 15% of the net worth of POWERGRID and is limited to ₹ 5,000 Crore in one project.

BOARD OF DIRECTORS DURING AGM 2019

Shri Ghanshyam Prasad | Shri J. I. Patel | Shri Tse Ten Dorji | Shri Sunil Kumar Sharma | Shri Ravi P. Singh

Shri M.N. Venkatesan | Shri A.R. Mahalakshmi | Shri K. Sreekant | Shri Manoj Kumar Mittal | Ms. Seema Gupta

Being a Central Public Sector Enterprise (CPSE), the appointment of Directors on the Board is made by Ministry of Power (MoP), GoI. The services of the Directors cease as per direction of the President of India or on the completion of the tenure or upon superannuation, whichever is earlier. The ratio of Basic Salary of the Board of Directors to the Executive Director to the Field Engineer is 6:5:1.

BOARD OF DIRECTORS

Strategic Direction

CHAIRMAN AND MANAGING DIRECTOR

FUNCTIONAL DIRECTORS

GOVERNMENT NOMINEE DIRECTORS AND INDEPENDENT DIRECTORS

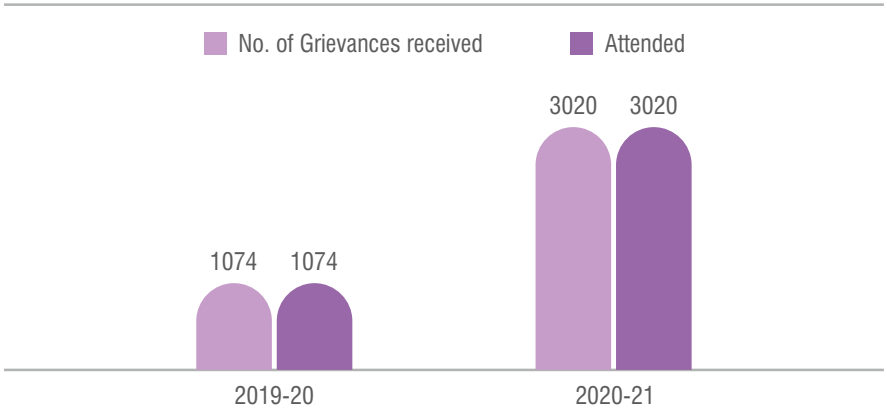
10 Directors in FY 2020 including 2 Government Nominees and 4 Independent Directors
10 Directors in FY 2021 including 2 Government Nominee and 3 Independent Directors

21 meetings were held during the FY 2020 & FY 2021
Details regarding number of meetings, role of the committees, members etc., are available in our Annual Report at the following links:
https://www.powergrid.in/sites/default/files/NSE_AR_dt29082020.pdf (page 119-142)
https://www.powergrid.in/sites/default/files/NSEBSE_AGMNOTICE_dt01092021_0.pdf (page 108-133)

FUNCTIONAL COMMITTEES

Strategic Management	Advisory Direction
Audit	Environmental and Social Policy & Procedures
Stakeholders' Relationship	Research & Development
Nominations & Remuneration	Telecom
Risk Management	
CSR	
Investment on Projects	
Award of Contracts	
Bonds	
Transfer/ Split/ Re-materialisation of Shares	
New Businesses	
Monetization of Assets through InvIT	

Investors' Grievance (No.)



POWERGRID has a dedicated Board Level Stakeholders' Relationship Committee to consider and resolve the grievances of shareholders, debenture-holders, and other security holders of the company including the complaints related to transfer of shares, non-receipt of balance sheet, non-receipt of declared dividends, etc. As on March '21, the committee is headed by an Independent Director and comprises of two full time directors. Three meetings of committee were held during the reporting period.

Details on external initiatives can be accessed through the above links of Annual Report 2020-21 at page 92.

TRANSPARENCY IN GOVERNANCE

POWERGRID advocates the principles of Good Governance, Transparency, Probity and Ethics in its management functioning. Our Board follows a completely transparent approach in discussing all project matters from inception to completion stage and also provides necessary direction & assistance.

Ensuring transparency of all activities of POWERGRID, all our stakeholders are well informed and kept involved through a positive and open relationship, through efficient means of disclosures and communication. Such mediums of disclosures/ communication include Annual Reports, General Meeting, Analysts & Investor Meets, Sustainability Report, Quarterly results, website (www.powergrid.in), newspapers etc.

In order to promote transparency and accountability & ensure timely response to our stakeholders' queries, an appropriate mechanism has been set up in line with Right to Information Act, 2005. Appellate Authorities have been nominated at Corporate and Regional offices across the country to provide required information to the citizens under the provisions of Act. For smooth functioning, POWERGRID has developed an in-house web based online RTI portal, which facilitates timely reply of RTI/ Appeal to applicant by real time monitoring of all RTIs/ Appeals. The portal also facilitates auto generation of various RTI reports for internal and external stakeholders. Around 1,200 and 1,000 nos. of RTI applications were received in the Company and processed as per the Act during FY 2020 & FY 2021 respectively. POWERGRID has also conducted third party audit of suo-motu disclosure as per RTI Act, 2005, report of the same is available on POWERGRID website.

ETHICS AND CODE OF CONDUCT

POWERGRID has two separate Codes of Business Ethics & Conduct – one for Board Members and another for Senior Management Personnel. Such codes are also aligned with Company's Vision, Mission & Objectives for enhancing ethical and transparent process in managing the affairs of the Company. Such codes are available on POWERGRID's website at https://www.powergrid.in/code-conductpolicies.

POWERGRID's CDA Rules define the desirable and non-desirable acts and conduct for the employees & extend to all employees working with it. The aspects of bribery and corruption are also covered under CDA rules. There are laid down procedures for actions in cases of non-compliance of the defined terms as well as for any misconduct.

Whistle Blower and Fraud Prevention Policy provides a system for disclosures made by employees or complaint of any fraud or suspected fraud involving employees of POWERGRID as well as representative of vendors, suppliers, contractors, service providers or any outside agencies doing any business

with POWERGRID. In order to further strengthen integrity, transparency and fairness, a number of business practices have been put in place such as well defined "Delegation of Powers", implementation of Works & Procurement Policy and Procedure (WPPP) for Pre-award and Post-award Stages, Integrity Pact Program, Monitoring of Contracts above ₹ 100 Crore by a panel of Independent External Monitors (IEMs), e-procurement mechanism, e-Reverse auction mechanism, Enterprise Resource Planning (ERP) etc.

POWERGRID has a dedicated Vigilance Department with emphasis on preventive and proactive vigilance & ensuring ethical practises are followed in the business activities. Vigilance Team mainly conducts 3 types of inspections – Process (online), Chief Technical Examiner (CTE) and Surprise inspections to prevent any unscrupulous activity in the allotment or implementation of projects. On the basis of inspections, system improvement initiatives have been recommended in the area of construction, recruitment, contract performance guarantee, crop & tree compensation, etc.

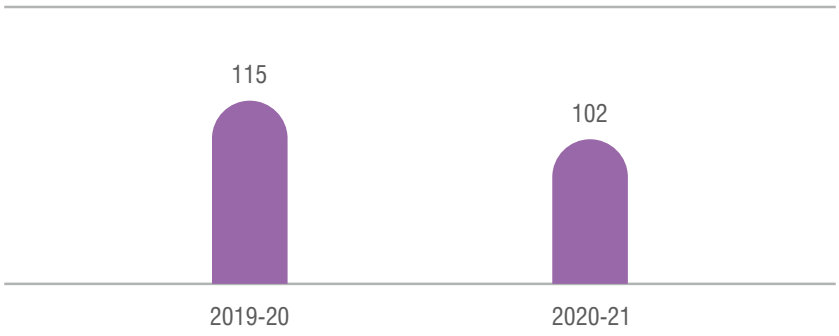
In order to increase the awareness and enhance capacity, we conducted various workshops/ training programmes on contract management, CDA rules, compliance of rules and policies, ethics management, etc. across the country. During the reporting period, 27 incidents of corruption were observed in which 57 employees were disciplined for violation of POWERGRID CDA rules.

Vigilance Awareness Week was organized during the reporting period. Activities such as essay competitions, quiz competitions, debates, panel discussions etc. were held in the company & also in various colleges and schools. For spreading awareness amongst general public, media tools such as road shows, nukkad natak, FM Radio channel, etc. were also utilized.

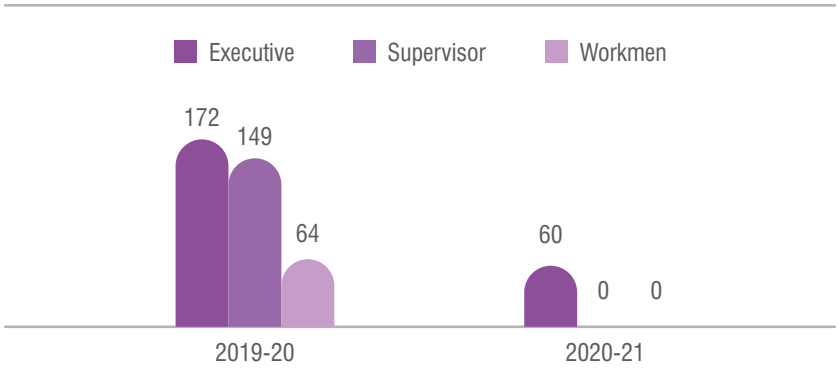
During the reporting period, no significant fines were levied on account of non-compliance with applicable laws and regulations.

Oath for Code of Business Ethics and Conduct

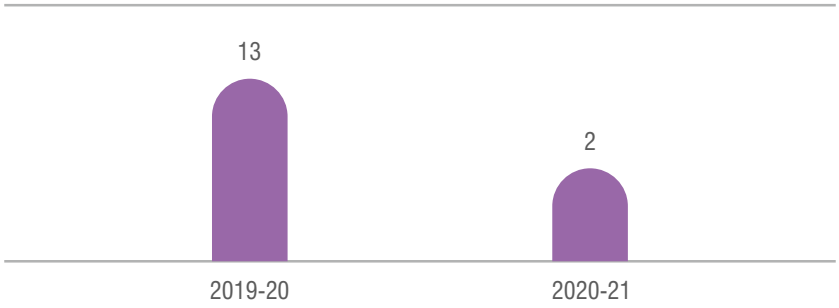
Vigilance Inspections (No.)



Anti-Corruption Training (No. of Employees)[1]



Vigilance Training Programs (No.)[1]



India Risk Management Awards

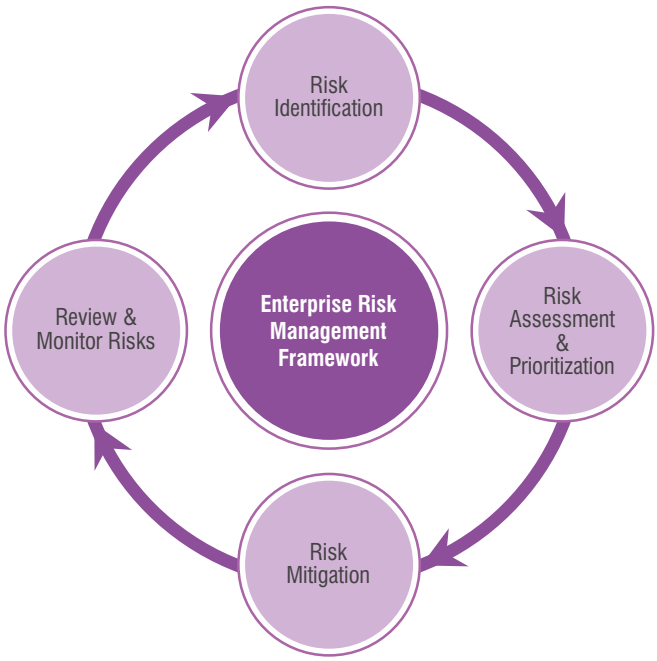
[1] Reduction in Training programs was impacted due to CoVID restrictions.

MANAGING RISKS

POWERGRID constantly innovates and develops technologies for mitigation of risks and challenges involved with providing reliable and uninterrupted power to all. To manage the uncertainties and complexities associated with POWERGRID's business operations and growth objectives, an Enterprise Risk Management (ERM) framework has been implemented as a structured, consistent and continuous process for identification, assessment, monitoring and management of risks. The significant business processes/ risks are monitored and controlled through various Key Performance Indicators (KPIs).

POWERGRID has a dedicated Board level Risk Management Committee, to frame, implement and monitor the risk management plan for POWERGRID, headed by Director (Projects) with Director (Finance), Director (Operations) & an Independent Director as members. The Committee meets at regular intervals and reviews KPIs & major business risks and provides corrective measures to improve business efficiency. The ERM approach has helped POWERGRID to improve strategic decision-making within the organization and also in risk mitigation. During the reporting period, five meetings of Risk Management Committee were held. Chief General Manager (Corporate Planning) has been designated as Chief Risk Officer of the Company.

A comprehensive mapping of Risks & Challenges and Mitigation strategies is presented herewith:



Digital Substation at Malerkotla Substation

Risks	Mitigation	Challenges
Financial Risks • Revenue Realization	• Graded Rebate Scheme, Opening of Letter of Credit, Tri-Partite Agreements (TPA), Regulation notices and Timely payment rebate to clients	• On time realization
Health & Safety Risks • Safety of Employees/workers in construction activities	• Issue of Personal Protective Equipment • Mandatory safety trainings to all employees engaged in construction activities • Provision of Safety Pact & Safety Plan for each project	
Compliance & Statutory Risks • Right of Way • Forest Clearance • Land for substation • Biodiversity Conservation	• Avoidance, Minimization, Mitigation • Alternative Route alignment study using modern techniques • Development of High Voltage Transmission Systems for bulk power transfer • Adoption of advanced/ new technologies • Use of High Performance Conductors in Existing & New lines • Land management practice to reduce land requirement • Design modification for use of Multi-circuit, compact and pole towers • Securing land through private purchase on "willing buyer-willing seller" basis • Broader Stakeholder participation/ consultation • Strict compliance of compensation norms including payment of compensation for tower base and land diminution value • Independent Biodiversity Assessment	• On time Statutory Clearances • Way leave/ RoW • Variation in compensation provisions of different State Govt.
Operational Risks • Synchronization Risks with generation projects • Grid Failure • Phenomenon related with Climate Change	• Signing of Agreements with power generating companies to share the transmission charges • Improved Grid Standards	• Strict Compliance of Grid Code/ Standards
	• Collaboration with national/ international research institutions and manufacturers for designing state-of-the-art transmission systems • Pollution mapping, SMART Grid, Digital Substation, use of GIS/ GPS during surveys, High Temperature Low Sag Conductor configuration, Long rod insulators • ERS/ Hotline maintenance, live line insulator washing, Aerial Patrolling & preventive maintenance	• Enhancing operational efficiency • Maintaining 99% system Availability • Development of Long distance High capacity transmission corridors • Strengthening of National Grid and Communication network
	• Skill enhancement through training • Campus recruitment from reputed institutions	• Attracting Skilled Manpower

ADDRESSING SUSTAINABILITY ISSUES

Successful demonstration of agreed Action Plan under Country Safeguard System (CSS) of ADB, after acceptance of POWERGRID's ESPP under CSS for 1st time in Asia

Partnering with Global Reporting Initiative (GRI) South Asia for United Nation's Sustainable Development Goals (SDGs) Agenda 2030

Due to constant emphasis on emerging threat of Climate Change and resultant catastrophe, there is a perceived change in the overall approach to Sustainable Development by most of the corporates in the last decade. This paradigm shift has become possible as a result of increasing emphasis of Policy makers, Regulators, Consumers and Investors as well as members of general public on proper management of Environmental and Social impacts associated with Businesses. It is now well understood that Sustainable Business practices are no more a showcase for the Business entities but rather a non-negotiable essential aspect of business management. While earlier the meaning of risk was largely confined to financial risks only, due to changing contours of businesses, the meaning and perception of the same also include Environmental, Social and Governance risks.

Recognizing the changing nature of business risks, POWERGRID has developed a very resilient risk management framework. This integrated and clearly structured risk management framework helps the company to achieve reduction in unacceptable performance variability, building confidence of stakeholders, enhanced Corporate Governance and to respond better to a changing business environment.

Power being an important catalyst in development has witnessed considerable expansion both in terms of quantum as well as technology in the last five decades. But such a growth has been accompanied by various Environmental & Social impacts. POWERGRID recognizes that its developmental activities have minimal environmental and social impact owing to very nature of activities and its proactive approach. POWERGRID's analytical approach has helped us direct our efforts to the most significant Environmental & Social issues for achieving the goal of Sustainable Development. Our endeavour is to achieve Sustainable Development through give interlinked themes: **Stakeholders, Environment, Networks, Statistics and Employees.** We understand the importance of sustainable development in the present

scenario and will always strive our imperatives in all our business activities to ensure that our efforts to promote sustainable development are successful. Further, POWERGRID is taking steps to align our sustainability-related aspects with global requirements and participate in assessment surveys carried out by agencies such as S&P Global CSA, FTSE annually. POWERGRID has been continuously appreciated by several independent agencies in the area of Sustainability Reporting. However, we are planning to further improve our performance by setting up higher goals and scaling up our sustainability efforts.

POWERGRID, being a responsible corporate entity always addresses negative externalities associated with its business processes. We sincerely believe and appreciate that meaning of business sustainability is not limited to financial and economic sustainability, but includes minimization and mitigation of environmental impacts, ensuring safe working conditions for employees and contract labour, addressing social issues arising from business practices and taking up relevant CSR projects and activities aimed at community development.

POWERGRID has committed its resources to ensure that its operations contribute to the sustainable development due to which our initiatives have been appreciated both at the national and international level. The Sustainability Framework was developed as a means to understand the concept of Sustainable business and its inclusion in all aspects of our business planning and operations. As per this framework, sustainability steps were structured and presented under three pillars: Value Protection, Value Creation and Value Enhancement. These were further divided into 4 focus areas: Leadership, Efficiency, Obligation and Compliance.

SUSTAINABLE DEVELOPMENT FRAMEWORK

LEADERSHIP	EFFICIENCY	OBLIGATION	COMPLIANCE
Increased consultancy and recognition through awards	Network availability above 99%	Practical innovative solutions	Fulfilling statutory requirements
Value enhancement	**Value creation**	**Value protection**	
Aspires not only to become the leading organization in power transmission but also in sustainability through continual improvement	Ensuring availability of network above 99% through technological innovations and adoption of state-of-art technologies Maintaining transmission losses under 4%	Integration and standardization of transmission system Community Development	Obtaining all statutory clearances Implementing environment and social management practices as described in our ESPP

SUSTAINABILITY STATEMENT

"POWERGRID is committed to the goal of sustainable development and conservation of nature and natural resources. While continually improving its management systems, accessing specialist knowledge and introducing state of the art and internationally proven technologies, POWERGRID strictly follows the basic principles of Avoidance, Minimization and Mitigation in dealing with environmental and social issues. Where necessary, restoration and enhancement is also undertaken."

Sustainability is one of the foundations of development of our business strategy that guides us in providing uninterrupted services to the country in an efficient and sustainable manner. We have always been at the forefront of development of better and efficient techniques & technologies to meet the needs of the present as well as the future generations, which is well reflected in our activities.

ENVIRONMENTAL AND SOCIAL POLICY & PROCEDURES

Our journey towards sustainability took a robust turn, when we evolved and disclosed our comprehensive corporate policy i.e. **"Environmental and Social Policy & Procedures (ESPP)"** in the year 1998 based on the principles of Avoidance, Minimization and Mitigation. Being a dynamic document, it was subsequently updated in the year 2005 and 2009, in order to ensure its vitality to address the emerging challenges on the front of ever evolving regulatory frameworks, expectations of the multilateral funding agencies and other stakeholders. The ESPP outlines POWERGRID's approach and commitment to deal with environmental and social issues & lays out management procedures and protocols to address the same. It lays a framework for identification, assessment and management for environmental and social concerns at organizational and project level on the well tested principles of Avoidance, Minimization and Mitigation with provision of restoration too.

The recognition of our ESPP by two leading multilateral agencies of the world, i.e. The World Bank and The Asian Development Bank in 2009 and 2017 under their policies of Use of Country System (UCS) and Country Safeguard System (CSS) respectively, a unique achievement available to POWERGRID only. It is also a solid testimony of our concerted efforts and acquisition of required skills in successful implementation of transmission projects in a sustainable manner including proper due diligence on Environmental & Social (E & S) issues. The E&S issues are being reviewed on regular basis including site visits keeping in mind the international best practices in the sector, at the Board level through an ESPP Review Committee comprising of eminent Environment and Social experts, nominated from Multilateral funding agencies and Independent Directors.

SOCIAL OBJECTIVES

Follow prescribed precautions to minimize disturbance to habitation, tribal areas and places of cultural heritage
Consult/involve Affected Persons/communities during all stages of project implementation
Special attention to marginalized and vulnerable groups and secure their active participation
Maintain highest standards of health and safety to avoid possible accidents

ENVIRONMENTAL OBJECTIVES

Avoid operations in environmentally sensitive areas, eco-sensitive zones, forests, sanctuaries, national parks, tiger/biosphere reserves, and coastal areas covered under CRZ through study of alternatives
Consider/design innovative/practical engineering/biological solutions by considering environmental implications of project implementation
Application of efficient and safe technology practices
Abate pollution in all activities and operations
Minimize energy losses and promote energy efficiency

Review of ESPP Implementation by ESPP Review Committee

Avoidance
of risks (including criteria and procedures for alternative routing)

Minimization
through Screening and Identification of Risks (from Environmental receptors, social receptors and Stakeholders)

Mitigation
of risk through impact management, implementation of Good International Industry Practices (GIIP), adequate compensation to affected stakeholders, public consultation and disclosure, and grievance redressal

Monitoring
reporting, evaluation, feedback, management review and corrective action

Responsibility
and resource allocation including an organization structure for management of social and environmental risks

ALIGNMENT WITH THE SDGs

The SDGs, came into force from January 2016 after being adopted by 193 countries at the United Nations Sustainable Development Summit (September 25-27, 2015), encompass all the key development sectors including education, health, sanitation, employment, infrastructure, energy, and environment, and set time-bound targets to achieve them. SDG comprises of 17 Goals with 169 targets & an Implementation span of 2016-30. The strategic shift from MDGs to SDGs have been focused on Conclusiveness, Comprehensiveness, Universality, Inclusiveness, Hunger distinct from Poverty, Peace Building, Resourcing & Measurability. It is a matter of great pride that POWERGRID has already aligned its business activities in line with the applicable listed SDGs. POWERGRID had long before developed its ESPP in 1998 to address all Environmental and Social issues related to POWERGRID's business activities. The alignment with the SDGs also perfectly falls in line with the principles of Avoidance, Minimization and Mitigation as mandated by our ESPP that has been a guiding force in adoption of a proactive approach towards achieving Environmental Excellence and Social Welfare. Our Sustainability strategy is focused on taking up activities/ projects focused under four aspects- Economic Performance, Our People, Our Environment and Our community.

HIGHLIGHTS OF ALIGNMENT WITH UN SUSTAINABLE DEVELOPMENT GOALS

POWERGRID has aligned its activities with 13 SDGs. A mapping with respect to applicable SDGs is given below:

	• Till March 2021, service connections have been provided to about 44 Lakhs BPL households under Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)/ Prime Minister Development Package (PMDP). • CSR activities worth ₹ 586 Crore undertaken in focus area of Rural livelihood, skill development, etc.
	• 'POWERGRID Vishram Sadan' at AIIMS (New Delhi), IGIMS (Patna), KGMU Phase-I (Lukcnow) Operational. • POWERGRID Vishram Sadan' at KGMU Phase-II (Lucknow), GMC (Guwahati), RIMS (Ranchi), DMCH (Darbhanga), NIMHANS (Bengaluru), SSGH (Vadodara) and MKCG (Behrampur) under implementation. • More than 3000 villagers benefitted through Health checkup camps at more than 40 locations across the country. • Support for Medical Infrastructure, Aids and Equipment to Hospitals, PHC, CHC.
	• 100 SMART classrooms in Govt. schools of Rajasthan. • Supply of desks/ benches to 82 Govt. schools of Tamil Nadu, Rajasthan, Bihar, Uttar Pradesh & Chhattisgarh. • Financial assistance for 1260 students under National Foundation for Communal Harmony. • Construction of 39 classrooms & 1 dining hall in different Govt. schools.
	• Policy is in place to ensure no discrimination on the basis of gender. • Implementation of Sexual Harassment of Women at Workplace (Prevention, Prohibitions and Redressal) Act, 2013 through Internal Complaint Committees (ICC). • Training on tailoring and sewing machines provided to women at 5 different locations of Haryana, Uttarakhand, Maharashtra & Rajasthan. • The O&M of Thrissur Substation handled completely by women employees. • Formation of Self help groups for women empowerment.
	• 2093 toilets constructed in Public places in Uttar Pradesh, Telangana and Bihar. • Installation of more than 1655 handpumps in 12 districts of Uttar Pradesh. • Supply of 05 nos. Organic Waste Converter Machine in Gujarat & Odisha. • Contribution for 'Namami Gange', an Integrated Conservation Mission for river Ganga.

7 AFFORDABLE AND CLEAN ENERGY	• Successful Implementation of Green Energy Corridors and Transmission Systems for evacuation of power from Solar Power Parks. • Infrastructure created for electrification of 87,409 partially/ un-electrified villages.
8 DECENT WORK AND ECONOMIC GROWTH	• Supporting and encouraging procurement from MSEs through various initiatives in line with Govt. of India Public Procurement Policy (PPP) for Micro and Small Enterprises (MSEs). • 25% increase in PAT in 2019-21 w.r.t. 2017-19. • Income Generating Skill Development Programme implemented for poor households of Damoh District. • Capacity Building Activities on Power Transmission line Tower Erection and Stringing in West Bengal.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	• Estimated Savings in major material consumption during 2019-21 was 37,12,236 MT. • Transmission network availability maintained above 99.5%. • Telecom network availability above 99.95%. • Use of inductive power in earth wire installed on transmission towers for powering of telecom antennas.
11 SUSTAINABLE CITIES AND COMMUNITIES	• Development of GIS substations which requires 1/4th of the land required for traditional AIS Substation. • Development/Adoption of latest technologies to enable power transmission at higher voltage levels (765 kV HVAC/ 800 kV HVDC) saved 56,835.5 ha of Right of Way (RoW). • Implementation of Smart Grid Projects. • Usage of innovatively designed tall/ multi-circuit towers in urban/ city area.

Road sweeping machine under CSR

 	• Massive plantations with suitable species at all our sub-stations. • Undertaken Study on "Assessment of Impacts of power lines on Avifauna in the Arid planes of Western Gujarat" which will help all Transmission and distribution utilities in formulating and implementing better safeguard measures for Avifauna protection. • More than 3.3 Lakhs equivalent tons of tCO_2e reduction during the reporting period as GHG reduction measure. • Reduction in involvement of forest land progressively from 6% in 1998 to less than 1.34% during reporting period as a result of adoption of various technological and managerial innovations.
	• Successful Development of 1200 kV HVAC System is collaboration with 35 Indian equipment manufacturers. • Various CSR projects taken up in collaboration with reputed agencies/institutions. • Vendor Development for 765 kV GIS in India. • Association with reputed organizations like GRI, TERI, The World Bank, ADB in various forms with an objective to achieve the sustainable path of development and growth through knowledge sharing, capacity building, exchange of ideas & best practices and sustainable finance.

1200 kV Transmission System

BUILDING STAKEHOLDERS RELATIONSHIP

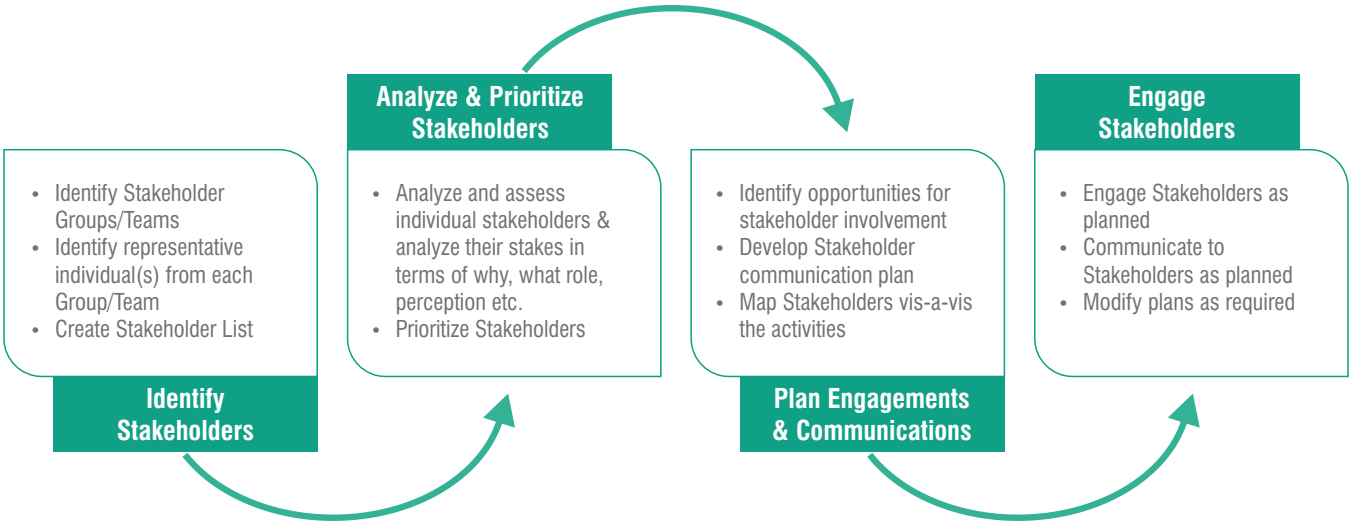
Dun & Bradstreet PSU Award for 2nd successive year - Best Navratna Overall: Best Navratna-Services and Best in Power Transmission

Strong and mutually-respectful relationships with our stakeholders are critical to the success and sustainability of POWERGRID's business. Hence, from beginning our endeavour is to develop a constructive and transparent relationships with all our stakeholders, which is constantly strengthened based on feedback facilitating improvement in operating processes and resultant performance.

FRAMEWORK FOR STAKEHOLDER ENGAGEMENT

Since stakeholders concerns/ influence have direct relation with success of our project implementation including opinion of community, not only on project viability but also on sector as a whole, we have incorporated stakeholder engagement plan as an integral part of project cycle. The feedbacks are continuous reviewed and feasible changes/ modifications are positively considered for adoption in project design to address such issues.

Accordingly, Stakeholder engagement is initiated shortly from conceptualization stage of the project development process and assessment, management & monitoring of the project.



IDENTIFICATION & ANALYSIS OF STAKEHOLDERS

The exercise clearly identifies and differentiates between different type of stakeholders based on their rights, roles, duties and responsibilities, in order to understand their roles properly. Despite diversity, an attempt is made to group homogenous sub-sections of stakeholders (with common interest) together and an effective engagement plan is then charted out. The Project stakeholders are identified based on their Impact, influence, partnership and interest under three major categories i.e. **Directly and indirectly project affected persons, including their legitimate representatives, Stakeholder having an interest in or influence over the project & Individuals and Institutions that participate in the implementation of the project.**

MAPPING AND ENGAGEMENT WITH STAKEHOLDERS

Based on above, these stakeholders are then mapped in accordance to their stake in the project at the early stage of the project development process itself, utilizing 'Interest and Influence Matrix' presented below.

ENGAGEMENT OF STAKEHOLDER

Modality and frequency of interaction with stakeholders are ascertained based on positioning of stakeholder in 'Interest and Influence Matrix' presented above. Key information of public consultations that is communicated in advance primarily includes an announcement thereof in the public media – local, regional and state, as well as the distribution of invitations and full details of the project and the agenda. It is crucial that this information is widely available, readily accessible, clearly outlined, and reaches all areas and segments of the target population.

All feedback received are further analyzed to improve upon the process as well as to address particular risk/ material aspect identified.

STAKEHOLDER ENGAGEMENT MATRIX

STAKEHOLDER CATEGORY	MODES OF ENGAGEMENT	FREQUENCY
Shareholders/Investors	Annual General Meeting	Once a year
	Board meetings	Minimum 4 times a year
	Annual Report	Once a year
	Analyst meetings	Minimum 4 times a year
Customers SEBs	Signing of Transmission Service Agreement (TSA)	With every project
Telecom -Private firms Consultancy (National & International)	Billing Collection & Disbursement Meetings	Quarterly
	Meetings with customers	As and when required

Funding Agencies (World Bank, ADB, IFC, KfW, etc.)	Appraisal/ Negotiation	With each Loan
	Review Missions	Half-yearly
	Progress Reports	Quarterly and Half-yearly
	Discussions w.r.t. changes in regulatory framework, funding agencies safeguard policies etc. and their implications for transmission sector/POWERGRID	As and when required
Employees	Employee Engagement Survey	As per HRD plan
	Open House	Quarterly
	Performance Review	Once in year
	Magazines	
	Cue	Quarterly
	Regional Magazines (10)	Quarterly
	Communique	Weekly
	Grid Darpan (Rajbhasha)	Half-yearly
	Candour (Vigilance)	Yearly
	Department specific meets	
	HRD Conclave	Twice a year
	PNBC meetings	As per requirement
	HR meetings	As and when required
Community / PAPs	Public Consultation	At every stage of the project from conceptualization to Operation & Maintenance
	Participation of community through community development	At projects where involuntary land acquisition takes place
	CSR initiatives	Need based (In consultation with communities)
Government	Compliance to Laws	On a continuous basis
	Comments/observations on proposed legislations	As & when a new enactment is proposed
	RPC (Regional Power Committee)	14 during reporting period
Regulators (SEBI / CERC/ BSE / NSE)	Compliance/ commercial activities	As & when required
Ministry of Power	Performance monitoring	As & when required
Ministry of Finance	Coordination for various entitled grants	As & when required
Suppliers & Contractors	Pre-award discussions	With every award
	Open bid discussions (OBD)	With every award
	Review meeting at various management levels	Monthly
	MPR of each contractor & suppliers	Monthly
	Joint discussions on technological advancements including Research & Development institutions	On a regular basis
	Feedback Sessions	Once a year
Media	Press Briefing/Invitations to events	Over 1000 Media coverage/ Press briefings 3 exhibitions
Technological Institutions	IITs / IISc for various emerging technologies	As & when required
	Leading academia Institutions for Emerging technologies	As & when required

COMMUNICATION MANAGEMENT

POWERGRID maintains full transparency and accountability with its stakeholders by communicating on various aspects such as achievements, growth, recent developments and future plans through various mediums such as Annual Reports, General Meetings, Analyst meets, investor meets, press communiqué, web portal, advertisements, sponsorships, exhibitions etc. Interviews as well as interaction of CMD and Directors are organized with leading business newspapers, magazines and channels to communicate the Company's strengths, achievements and future strategy to the investors.

Ensuring such timely and precise disclosure of information has earned widespread appreciation and applause at Domestic and International fronts, which has also have been instrumental in bringing transparent work culture in the organization. Such positive perception of the company has helped us to implement projects and operations in extremely challenging conditions of North Eastern Region, J&K etc.

During the reporting period, POWERGRID has showcased its state-of-the-art technological interventions and achievements in various Domestic and International Exhibitions and conferences held at GRIDTECH-2019 (Hosted the 6th International Exhibition and Conference at New Delhi), Abu Dhabi, South Africa etc.

Leveraging upon its social media presence, POWERGRID has been at the forefront to engage with its virtual audiences & media savvy stakeholders by providing real time access to information through digital media platforms viz. Facebook, Twitter, Youtube and LinkedIn. A dedicated Communication Lounge on the website also provides a one-stop solution to all communication requirements.

Investor/Analyst Meet

Many notable milestones have been achieved by the company during the reporting period. Some are mentioned below:

- POWERGRID has emerged successful in 12 projects including 09 ISTS and 03 Intra-state projects.
- Transfer of Srinagar Leh Transmission System, flagship project of GoI for providing connectivity to the Ladakh region with the National Grid, to POWERGRID in Oct'19.
- Acquisition of 74% stake of Jaiprakash Power Ventures Limited for ₹ 354.5 Crore resulting in JAYPEE POWERGRID LIMITED (JPL) becoming a wholly own subsidiary of POWERGRID in Mar'21.
- Undertaken monetization of assets through Infrastructure Investment Trust (InvIT) model in accordance with GoI guidelines and POWERGRID is the first CPSE to undertake asset recycling through InvIT structure.
- Incorporation of a wholly owned subsidiary Central Transmission Utility of India Limited (CTUIL) in Dec'20 to undertake and discharge all functions of CTU w.e.f 01 April 2021. As the CTU functions are not commercial oriented, the separation of CTU functions is not expected to have material impact on the business operations of the Company.

BUILDING TRUST IN CUSTOMERS

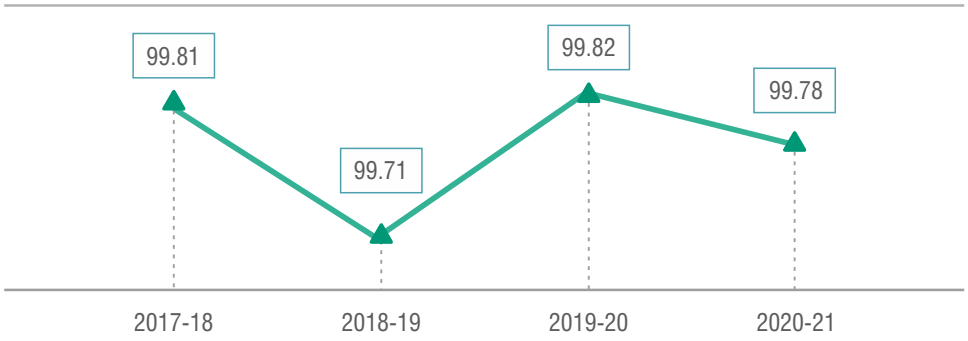
The Inter-State transmission has seen considerable growth in the past decade, which led to the creation of a synchronous National Grid and has been an enabler of power markets in the country. The transmission requirements are sensitive to load growth and generation additions & therefore the overall emerging power sector scenario in India augurs well for transmission sector, which is a vital link in the power supply value chain.

Providing uninterrupted power supply to our customers is the primary responsibility of POWERGRID. We have constantly maintained our transmission system availability well above 99%, achieving 99.82% and 99.78% availability during 2019-20 and 2020-21 respectively. The number of tripping per line was restricted to 0.39 and 0.36 in 2019-20 and 2020-21 respectively. Such reliable transmission network has been maintained through state-of-the-art O&M practices and proper planning of annual maintenance activities, POWERGRID has continuously maintained transmission losses to international benchmark of less than 4% level making POWERGRID the most trust-worthy power transmission entity in the country.

Continuing without thrust on Grid Stability, no incidence of major grid disturbance has occurred in the current reporting period. We are also pleased to inform that no incident of customer privacy breach or loss of customer data was reported during the reporting period.

Transmission system availability well above **99%**, achieving **99.82%** and **99.78%** availability during 2019-20 and 2020-21 respectively. The number of tripping per line was restricted to **0.39** and **0.36** in 2019-20 and 2020-21 respectively.

Transmission System Availability (%)



Such high system availability is achieved through deployment of state-of-the-art operation and maintenance techniques at par with international standards. Some of the techniques being deployed for management of assets across the Company include aerial patrolling of transmission lines, Helicopter equipped with Gimbal mounted LIDAR (Light Detection and Ranging), Thermo-vision Camera, Corona Camera, high resolution video, digital camera, travelling wave online fault locator, digital Tele protection System, variable frequency capacitance & tan-delta measurement for Transformer/ Reactor bushings, DCRM for breakers, third harmonic resistive current measurement for Surge Arrestors, Partial Discharge measurement in GIS etc. These techniques have proved to be very useful in detection of defects at an early stage & lead to Preventive/ corrective actions in advance to avert major failures. Maintenance activities are planned well in advance and an "Annual Maintenance Plan" is chalked out for every asset through live line or shutdown. In order to improve further, POWERGRID O&M practices are regularly being benchmarked internationally through "International Transmission Operation and Maintenance Study" (ITOMS) carried out by UMS, USA. In ITOMS studies/ bench marking, 30 leading global power transmission utilities across the Globe participate and their performances are evaluated and benchmarked. As per ITOMS report, POWERGRID performance is one of the best among other peer groups. As a part of continual improvement and enhancement of skilled manpower in the company, expert groups for transformers, HVDC, GIS, Switchgear, SVC/STATCOM, ERS, Hotline etc., have been formed to reinforce the competency of manpower and early restoration of system in case of failures.

The loss of electricity infrastructure or significant curtailment of service may have an immediate and in some cases, long term adverse effect on a region. As such, regardless of the cause of an emergency, the prompt restoration of generation, transmission and distribution system is vital to the well-being of the individual citizens and the economy of the country. POWERGRID's priority is to restore the power supply to the EHV transmission network affected by disastrous incidents to enable restoration of electrical supply to the largest number of customers as quickly as possible.

We have developed and maintained a well laid down Disaster Management Plan in order to ensure prompt restoration of power supply to disaster-affected Extra High Voltage (EHV) transmission network. We also play a role in Emergency restoration of power transmission system as part of the National Disaster Relief System. POWERGRID's Emergency Restoration System(ERS) have been placed at strategic locations for rapid restoration of transmission lines damaged during natural/ manmade disasters. These systems have been developed as light weight & modular which makes their deployment possible even in inaccessible locations and also reduces the restoration time considerably. In recent years, ERS has been used for restoration of lines of GETCO (Gujarat), OPTCL (Odisha), KSEB (Kerala), Delhi Transco (DTL), APTRANSCO (A.P) and JKPDD (J&K) besides POWERGRID transmission lines during natural disasters.

During the reporting period, 7 nos. of severe cyclones (namely Amphan, Nisarga, Nivar, Burevi Tauktae, Yaas and Gulab) have hit the coastal areas adjoining Arabian Sea/ Bay of Bengal. Although different safety factors as per prevalent standards are considered during design of power transmission elements for smooth operation under inclement weather conditions, any damage to power transmission system due to such natural disasters cannot be ruled out completely. However, advance preparations/ proactive actions can be planned for minimizing the duration of outage, in case of any eventuality. Due to proactive approach adopted by POWERGRID, no major damage to its transmission system has occurred during 7 cyclones.

POWERGRID has in place a full-fledged "Crisis & Disaster Management Plan" for taking swift actions during pre and post crisis/ disaster conditions and for speedy restoration of damaged power infrastructure. It outlines a hierarchical set up of crisis/ disaster management at various levels for effectively and efficiently dealing with crises and disasters as well as roles/ responsibilities of different departments in disaster management as per guidelines issued by MoP from time to time. Further, POWERGRID has in place a Standard Operating Procedure (SOP) for disaster management to plan for quick response and to recover affected power system from unexpected events/ situations in shortest possible time. A specialized team of experts have been trained and deployed in various regions for restoration of damaged transmission lines. Depending upon the extent of damages, resources from other regions are also pooled to expedite the restoration work. Necessary support facilities like communication equipments, portable generators, tools and plants etc. are also available to enable the ERS team to be self-contained and work effectively without local assistance which is normally not available during such natural calamities.

POWERGRID's Technology Development Department has been taking up many research and development activities in pursuit of technological excellence in power transmission to remain at par with international utilities. POWERGRID is a part of International bodies like CIGRE, IEC etc. for various technologies and is contributing significantly in its International standardization efforts.

POWERGRID is actively pursuing seamless integration of new and efficient technologies in Indian Power Grid to create environment-friendly transmission system with focus on reduction of transmission losses and optimizing the right-of-way (RoW) requirement while establishing transmission corridors as well as reducing the land requirement for establishment of substations. POWERGRID has always given special emphasis on adoption of new technologies available around the globe for improving the quality of power supply, reduction of losses, optimum utilization of the available transmission assets, conservation of environment and optimizing upon the cost of delivered power. The company is working in collaboration with International/ National research/ academic institutions; manufacturers etc. and is thus enhancing its in-house capabilities for design and engineering of state-of-the-art transmission systems.

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POWERGRID Advanced Research and Technology Centre (PARTeC)

POWERGRID has established world class laboratories and test setup at Manesar, Gurugram for carrying out research and development in power transmission sector. The facility is equipped with state-of-the-art laboratories for Power Transmission system including the Power system analysis, Real Time Simulator, Protection, Automation and Control, Wide Area Measurement System, Equipment Testing, Diagnostics and Calibration, Material Science & Data analytics facility. This has been developed in collaboration with various Academic and Research Institutions & Manufacturers in India and abroad in the areas of power transmission research, analysis, testing and calibration. Further, the laboratories have extended services to external clients for Dynamic testing, Conformance testing etc. of Intelligent Electronic Devices (IEDs), Compliance Testing of Phasor Measurement Units (PMU), Electric and Magnetic field measurement and analysis, etc.

Intelligent Condition and Asset Monitoring Systems

To manage the critical assets in an efficient manner, in-house asset monitoring software systems have been developed. One such software is Transformer Online Condition Monitoring System (TOCMS) that is enabling the asset managers to take timely action for preventing failures of transformers/ reactors. Further POWERGRID Asset Life Management System (PALMS) has been developed completely in-house, which uses off-line data from ERP for condition assessment of the transformers in a more efficient way based on Asset Health Indexing (AHI). PALMS segregates the transformers on the basis of their health index values, ranking of the fleet of transformers based on their condition & helps in avoiding costly downtime of critical transformers, failure of critical transformers and safeguarding operator/worker lives. In a bid to secure the intellectual property rights of the Company, a patent application has been filed for 'System and method for health assessment of Transformers and Reactors'. Further, copyright has been received for TOCMS & PALMS software.

Resin Impregnated Paper bushings

Considering the benefits accrued and feedback on migration to Resin Impregnated Paper (RIP) bushings in 400 kV Transformers and Reactors, POWERGRID facilitated development of 800 kV RIP bushing for introduction in 800 kV Transformers and Reactors. These new technology bushings are expected to reduce chances of fire breaking out and have minimalistic effects on the nearby equipment in switchyard in the unlikely event of its catastrophic failure (bursting).

Digital Substation

As a boost to **Atmanirbhar Bharat Abhiyan**, POWERGRID in collaboration with BHEL has successfully commissioned India's first indigenously developed 400 kV Optical Current Transformer along with Digital Substation components at 400/220 kV Bhiwadi Substation of POWERGRID. This collaborative R&D project is a major step towards complete digitization of the substation automation system.

Utilizing the state-of-the-art technology, POWERGRID has commissioned, a full digital substation (including Bus Bar protection) with IEC 61850 Process Bus based Protection Automation and Control system. This has been successfully demonstrated by retrofitting of conventional control and protection system at 400/220 kV Malerkotla substation. Significant reduction in copper cables has been achieved alongwith advanced diagnostics and online testing features.

BUILDING TRUST IN COMMUNITY

POWERGRID's developmental activities have always been associated with active involvement of all our stakeholders and respecting the rights of the community often going beyond the applicable Laws and Regulations. Accordingly, Public consultation & information dissemination has been made an indispensable part of our project planning and implementation. Our commitment towards Social Responsibility is amply reflected in our policies such as ESPP and CSR Policy and vivid through the certifications like ISO 45001 and Social Accountability SA 8000.

A number of policy and reform based initiatives like Integrated Power Development Scheme (IPDS), 100% village electrification under DDUGJY, Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA), UDAY, UJALA etc. have been taken by the Government with an objective to ensure enhanced access to electricity and sustainable growth of the sector. In line with said policies, during the reporting period, POWERGRID has achieved its assigned targets of releasing service connections under the GoI mission of connecting each and every household.

Till Mar'21, under GoI's DDUGJY/PMDP for rural electricity infrastructure and household electrification, POWERGRID has implemented infrastructure work for rural electrification in 95 districts of 10 States in the country. Infrastructure has been created for electrification of 87,409 villages (i.e., partially electrified & un-electrified villages) and service connections have been provided to about 44 Lakhs BPL households.

POWERGRID has implemented infrastructure work for rural electrification in **95** districts of **10** States in the country. Infrastructure has been created for electrification of **87,409** villages and service connections have been provided to about **44** Lakhs BPL households.

We ensure safety of the community by implementation of General Safety Provisions and Standards as prescribed in our policies. Improved mechanisms of emergency rescue and user-side safety checks ensure that there are no major accidents during the construction and maintenance activities. We also spread awareness on safe and proper usage of electricity via newspaper advertisements. Both in-house and independent studies have confirmed that Electro Magnetic Field (EMF) levels are well within the prescribed international limits/norms. There were no public fatalities during the reporting period.

BUILDING TRUST IN EMPLOYEES

POWERGRID is continuously updating its welfare policies in line with the industry trend and to meet the changing needs for its employees. We have maintained a work culture that ensures personal and professional development of our employees. During the reporting period, work from home was introduced for smooth functioning during COVID-19 situation. The employee attrition rates (including FTBs) for 2019-20 and 2020-21 were 1.58% and 1.16%. Employees are kept updated about the latest developments and policies of the company via newsletters, house journals, wall magazines, lounge, regular media updates, e-magazines, 'Communiqué' and 'CUE'; display magazine 'LOUNGE', short films videos, creatives, and digital quarterly magazines. For better communication between the management and the employees, regular interactions are organised through open sessions.

As an ISO 45001, ISO 14001 and SA 8000 certified organization, we ensure that all the processes and systems regarding safety and health at work are strictly adhered to, creating a safe working environment for our employees. To achieve this, employees are trained on basic health & safety norms. Moreover, all regular employees also undergo regular preventive checkups demonstrating the company's commitment towards the well being of its employees.

BUILDING TRUST IN SUPPLY CHAIN

POWERGRID believes that a strong and reliable supply chain is integral to its growth and our open, transparent and non-discriminatory processes ensure that our vendors are selected on the basis of innovation quotient, supply assurance, capability/capacity to manufacture, environment concerns, labour practices, social accountability aspects, product quality, cost competitiveness etc. In order to enhance transparency, a structured e-tendering/award process is followed for award of any contract.

POWERGRID has a very big supply chain which caters to requirement of projects and O&M activities. Our suppliers include both domestic and international suppliers, and in order to ensure transparency, a Compendium of Vendors is disclosed on our website for approved vendors/ suppliers. During the reporting period, we empanelled 174 new suppliers. All new suppliers/ vendors were screened for qualifying requirements and also on compliance related to Environment and various Social aspects such as child labour, discrimination, availability of valid Consent to Operate from respective State Pollution Control Board/committee, etc. Process audits/inspections continued in the manufacturing units of various vendors, sub-vendors and across the supply chain to achieve the target of optimization of product. Smart Inspections have been taken up on a wide scale. Quality Inspections and assessment of vendors covers various technical aspects and performance of vendors on labour issues, human rights, social issues, safety issues, etc.

YEAR	TOTAL CONTRACTS AWARDED[2]		DOMESTIC BIDDING		INTERNATIONAL BIDDING	
	Numbers	Amount (In Crore)	Numbers	Amount (In Crore)	Numbers	Amount (In Crore)
2019-20	89	3915	82	3564	7	351
2020-21	95	1890	94	1889	1	1

POWERGRID through various policy measures is encouraging local sourcing/ indigenous participation and encouraging technical cooperation with suppliers, thereby promoting localization and domestic production. Over the decade, we have been successful in developing indigenous technologies through well-established supply chain. POWERGRID has been operating in line with 'Make in India' Policy of GoI & has taken many measures to encourage Micro & Small Enterprises (MSEs) and Local Suppliers. Majority of the Procurement being done by POWERGRID are through Domestic Bidding with focus on local suppliers and indigenous manufacturers. Special emphasis has been kept on locally manufactured goods and services under the 'Make in India' initiatives. Our contribution for 'Make in India' initiative is evident from the fact that POWERGRID concerted efforts for development of new plants and facilities in India by foreign manufactures for equipment like GIS, transformers, reactors, STATCOM, OPGW, etc., has resulted in reduction of import of transmission related equipment from 12.23% in 2016-17 to 2.60% in FY 2020-21.

The latest developments in Public Procurement as per orders of GoI have already been implemented in POWERGRID. The order related to Local Suppliers: Public Procurement (Preference to Make in India) Order – 2017 have been implemented. Further, the packages for which Nodal Ministers have notified with sufficient local capacity & competition, only Class-I local suppliers are eligible to bid, irrespective of NIT cost estimate. For all packages where the NIT cost estimate (excl. T&D) is less than ₹ 200 Crore, only Class-I and Class-II Local Suppliers are eligible to bid. Purchase preference is also given to Class-I Local Suppliers under relevant packages.

For promotion of Micro, Small and Medium Enterprises (MSME), MSEs: Public Procurement Policy for Micro & Small Enterprises (MSEs) Order, 2012 have been implemented in POWERGRID. MSEs have been exempted from submission of Tender Document Fee/ Bid Security. Purchase preference is also given to MSEs under relevant packages. In terms of the above policy of the GoI, the total eligible value of annual procurement of goods produced and services rendered by MSEs (including MSEs owned by SC/ ST and women entrepreneurs) during the reporting period was ₹ 3,855 Crore. The total procurement from MSEs (including MSEs owned by SC/ST and women entrepreneurs) was ₹ 1,647 Crore. POWERGRID has also achieved the target of mandatory procurement of 25% out of total annual purchases of products and services rendered

[2] Corporate Office

by Micro and Small Enterprises in line with Public Procurement Policy (Order 2012) read in conjugation with its amendment in November, 2018.

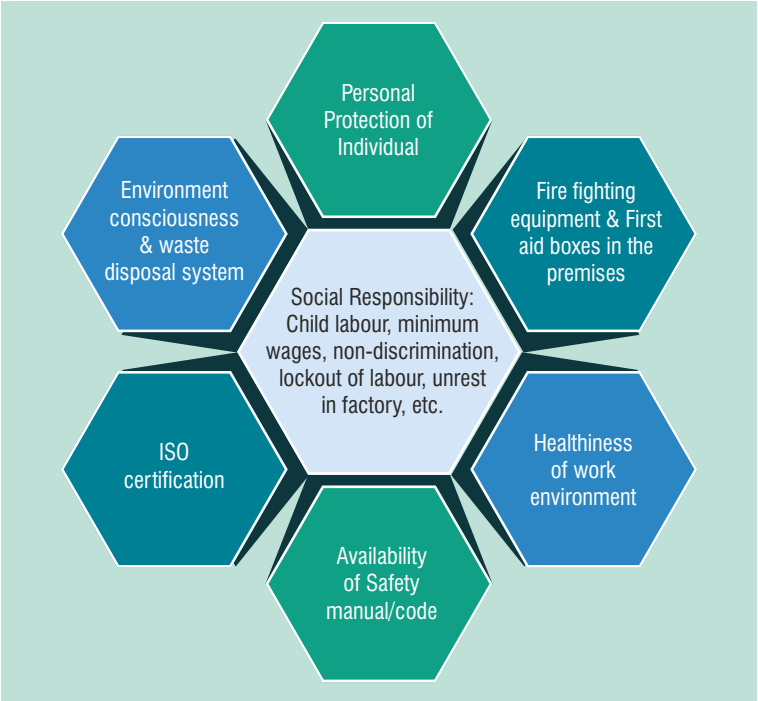
During the reporting period, in order to encourage and develop Vendors, 23 vendor development sessions were conducted at National and Regional Level. In addition to that, POWERGRID consistently participates in Buyer – Seller meets cum Interaction sessions being organized by different CPSUs, Industrial Bodies like CII, FICCI, Federation of Gujarat Industries, Indian Chamber of Commerce (ICC) etc. and with Government organizations working for development of MSEs such as Ministry of MSME, MSME Development Institutes (Dis), National Small Industries Corporation (NSIC), EEPC India, IPF SME forum, National SC/ST Hub etc.

A provision has been included in many of the packages under global bidding provisions regarding establishment of manufacturing facility in India by foreign manufacturers. Few Indian suppliers have also been promoted by providing some relaxation in qualifying parameters without compromising on quality, with a provision of extended warranty of their equipment. In many packages, Indian manufacturers are also given an opportunity to bid in technical support with a foreign supplier as a partner/ collaborator.

Safety Pact & Safety Plan are an integral part of contract document and all vendors are advised through various vendor meets regarding such plans and their compliances before

submitting their bid. The environment, social issues, labour compliance and sustainability issues are also given due importance in such vendor meets.

Technology upgradation is generally carried out through interaction with vendors, inspection engineers, developments in the power system happening across the globe, captured through seminars, technical literature etc. For system improvement, a vendor grievance system is in place for grievance redressal. The grievances received through the portal are analyzed and addressed efficiently including improvement in process, if needed.



BUILDING TRUST IN SHAREHOLDERS & INVESTORS

POWERGRID has been consistent in its efforts to fulfil all the targets outlined by the GoI through MoU and has been expanding its business, thereby creating wealth for its shareholders. The CMD addresses the shareholders in the presence of board at least once a year at the Annual General Meeting and at several other analyst meets.

Investors are kept well informed about the present achievements of the company and future plans through various communication mediums. In case additional insights are felt necessary, Investors reach to POWERGRID and request senior level management interactions to comprehend well the growth opportunities/ future plans and other vital details to safeguard their investment.

During investor interactions, the approach towards sustainability reporting has been well appreciated by the investors and disclosures through sustainability reporting is providing ample understanding to external stakeholders to gauge POWERGRID's commitment towards sustainability aspects. However, during interaction it emerged that disclosure towards ESG alignment can be increased for effective management of various aspects like better gender diversity, Human rights, Bio Diversity, etc.

BUILDING TRUST IN GOVERNMENT

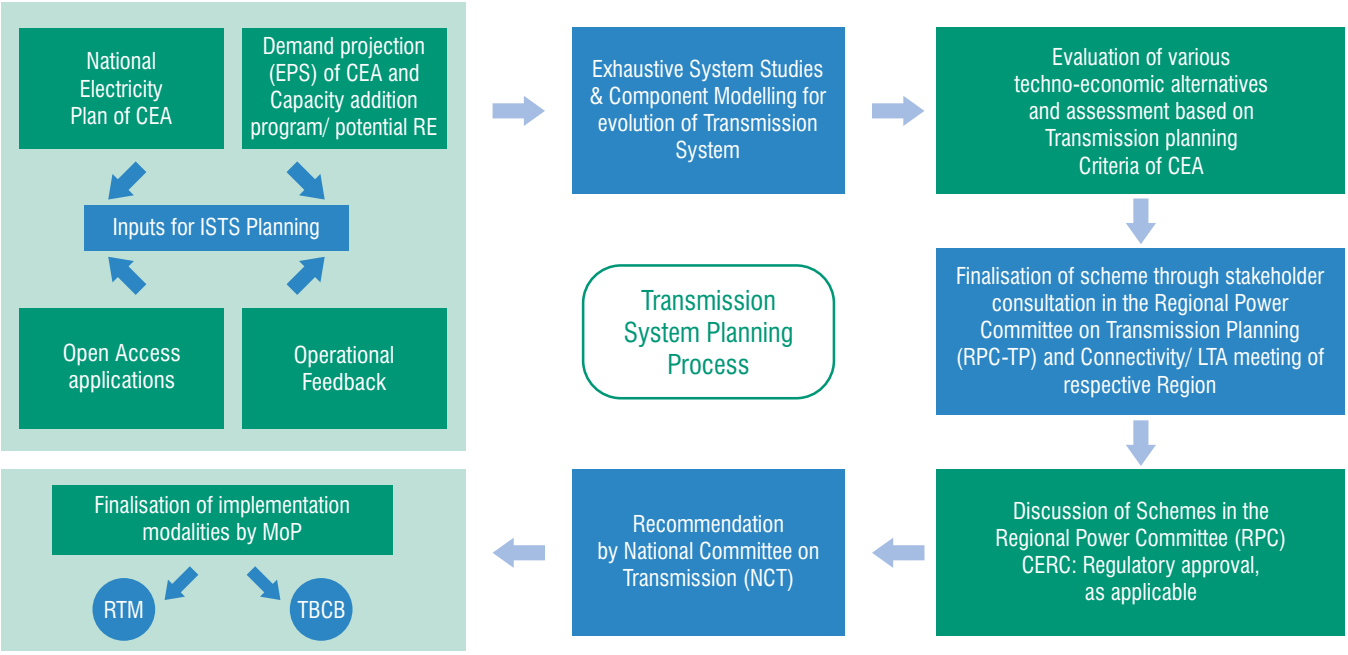
POWERGRID, as the power transmission carrier of the Nation, plays a very important role in the Indian Power Sector. We regularly coordinate and interact with various government departments & regulatory bodies such as Ministry of Power (MoP), Ministry of Environment, Forest and Climate Change (MoEFCC), Ministry of New & Renewable Energy, Central Electricity Authority (CEA), Central Electricity Regulatory Commission (CERC), etc. on a regular basis.

During the reporting period, the responsibility of CTU was with POWERGRID & presently CTU functions are being looked after by CTUIL, a 100% owned subsidiary of POWERGRID. POWERGRID as CTU is mandated to discharge all the functions of planning and co-ordination related to Inter State Transmission System with State Transmission Utilities, Central Government, State Governments, generating companies, Regional Power Committees, Authority and licensees. In addition, it has to ensure development of an efficient and co-ordinated system of Inter State Transmission lines for smooth flow of electricity from generating stations to load centres and to provide non-discriminatory open access to its transmission system.

Our annual targets are set in consultation with the GoI through a formal Memorandum of Understanding (MoU). Year on year we achieve bigger targets, strengthen our policies to operate efficiently and minimize & mitigate the impacts on communities affected by our business. While implementing the same, GoI plays a very important role in facilitating necessary approvals, securing settlement of dues with the State Discoms and providing sovereign guarantee for loans from multilateral funding agencies such as the World Bank, Asian Development Bank and KfW. As a listed Public Sector entity, POWERGRID is regulated by the guidelines of Ministry of Corporate Affairs and SEBI. For ensuring revenue generation from our transmission business, various technical discussions are held with Central Electricity Regulatory Commission (CERC).

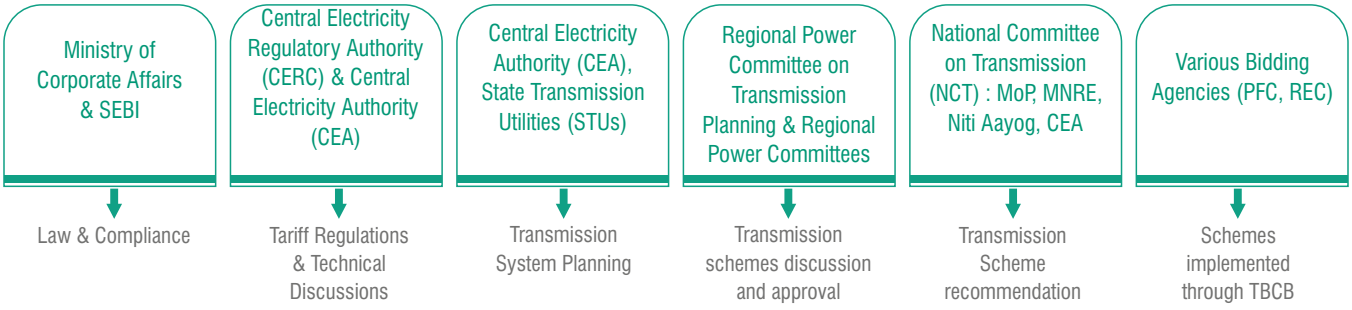
The Inter-State transmission planning is jointly carried out by CEA & CTU based on the inputs of connectivity/LTA applications, load data from EPS report of CEA, operational feedback from POSOCO etc. POWERGRID being the CTU of the country acts as a coordinator among all stakeholders including CEA, POSOCO, STUs, RPCs, Generating Companies, etc. A Schematic diagram for Transmission planning process is given in figure below.

Transmission System Planning Process



Regional Power Committee on Transmission Planning comprises of CEA, POSOCO, STUs, RPC representative, NTPC, NHPC, NEEPCO, DVC, SECI & Regional Power Committees comprises of CEA, POSOCO, STUs, DISCOMs, SLDCs, GENCOS, IPPs, Electricity traders.

Stakeholders



PANDEMIC MANAGEMENT

The CoVID-19 pandemic has not only created unprecedented situation all over world but also impacted every aspects/ activities of the business and stakeholders. During these testing times, POWERGRID has implemented many measures to safeguard and protect our stakeholders from this pandemic such as development of CoVID Isolation facility at 148 locations, 24x7 control rooms and task force,Vaccination camps for POWERGRID employees, medical dependents and contract workers, providing support for medical equipment all over India etc.

POWERGRID has protected the workers associated with our activities with measures such as ex-gratia amounting to ₹ 250 per day during the Lockdown, PPE kits/ masks/ sanitizers, ration/meal packets, etc.

In order to prevent spread of CoVID, measures such as thermal screening, provision of hand sanitizer at multiple places, disinfection of offices & townships on periodical basis, staggered timings, etc. were introduced.

Cooked Meal Packets for workers at Pugalur

Supply of ration items to workers at Dibrugarh

Sanitation Supply items at Neyveli

CoVID relief work at Gorakhpur

MATERIALITY ANALYSIS AND MAPPING

POWERGRID's sustainability strategy is aligned with its principal business and operational risks. Over the years, the strategy has been reassessed and reworked to align the organization with the existing market conditions. Our sustainability prioritization exercise helps us to segregate and prioritize sustainability issues on severity of impact/importance.

ECONOMIC PERFORMANCE

Handing over of Final Dividend to MoP

CBIP Award 2020 for 'Best Performing Power Transmission Utility' for its outstanding contribution to the Nation consistently by setting highest benchmarks in power transmission in the country

Dun & Bradstreet Corporate Awards 2019 in the category 'Best Growth Performance – Power' and Dun & Bradstreet Infra Awards 2019 in the category 'Power Transmission'

Electricity is one of the most critical infrastructure and a key ingredient for socio-economic development of India. For sustained economic growth, development of suitable power infrastructure is one of the key developmental factor. Despite India being the third largest electricity consumer in the world, the per capita electricity consumption was 1,208 kWh (FY 2019-20) which is considerably low as compared to the world average of more than 3,200 kWh. Lower consumption base and a decent long-term GDP growth forecast implies that power demand will grow over the foreseeable future.

For energy security and sustained long term growth, GoI, through its various policy and reform initiatives is making continuous efforts for facilitating development of Renewable electricity generation capacity together with development of related transmission and distribution infrastructure. India's power sector is diversified with the presence of various power generation sources including conventional and renewable; a synchronously operating national grid comprising inter-regional, regional and state grids, a vibrant electricity market and a distribution sector providing electricity to end consumers.

On the National level, the peak power and energy deficits have considerably reduced over the years. The shortages in peak power and energy have reduced primarily due to addition in generation capacity, expansion of transmission systems and accomplishment **of 'One Nation - One Grid - One Frequency'** which has led to the creation of a vibrant electricity power market in India. During the last 5 years, there has been consistent growth in the transmission infrastructure in the country driven by additions in both thermal and Renewable Energy (RE) generation. India is working towards low carbon emission path while meeting its developmental goals. In this regard, as per Nationally Determined Contributions (INDCs), India is aiming to have 40% of the total installed capacity by the year 2030 based on non-fossil fuel sources. Further, Central Electricity Authority (CEA) in its Report on Optimal Generation Capacity Mix for 2029-30 (January 2020) has envisaged installed generation capacity of 817 GW by 2029-30, of which RE is expected to be approximately 445 GW (55%). Further, the projected gross electricity generation (BU) during the year 2029-30 is likely to be 2,518 BU, of which 805 BU (32%) is expected to be contributed by RE.

POWERGRID's strategy is designed to closely align with government strategy initiatives so that we contribute to achieving the country's vision and goals for a sustainable economy. POWERGRID aims to maximize its direct economic contribution through sound management of its core business and its investments. Our indirect contribution is a consequence of our procurement, infrastructure investments and the involvement of local people and businesses in our supply chain. As a part of the country's transmission sector, POWERGRID is playing a vital role in the power system value chain by providing infrastructure for evacuation of power from the renewable rich areas and connecting the generating stations including integration of Renewable Energy (RE) sources from the RE rich states.

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Financial Management and Regulatory Norms

Managing our finances judiciously and adhere to all applicable laws of the land

Sharing of the wealth

Sharing of wealth with our stakeholders including employees, capital providers

Investment in Assets, R&D and infrastructure

Engaged in creation of transmission infrastructure in the country

Investing in Innovations and technology development

Enagage with local Suppliers - Promote Indigenization

Local sourcing of material and building capacities in the Regions

Employment Generation

Direct and Indirect Employment opportunities

MoU signing with MoP for 2020-21

PERFORMANCE HIGHLIGHTS

The reporting period was extremely challenging due to ongoing COVID-19 pandemic. Inspite of such challenges, POWERGRID has continuously proven its trustworthiness to its stakeholders by outstanding performance recording a total profit of ₹ 22,746.96 Crore in the current reporting period, an increase of 25% over the net profit gained in 2017-19. POWERGRID's share price has gained consistently over the years with increase in Earnings Per Share (EPS) to ₹ 22.81 in FY 2021from ₹ 19 in FY 2019.

During the reporting period, POWERGRID achieved capital investment of ₹ 26,463 Crore and assets capitalization of ₹ 41,796 Crore. Funds for the projects/ schemes were mobilized through bonds, term loans, external commercial borrowings/ suppliers' credit, internal resources, power system development fund, Central Financial Assistance (Ministry of New and Renewable Energy).

During the reporting period, investment approvals for more than ₹ 5,078 Crore projects under regulated tariff mechanism (RTM) were accorded by POWERGRID's Board for implementation of projects/ schemes & projects worth more than ₹ 8,300 Crore were acquired under tariff based competitive bidding (TBCB).

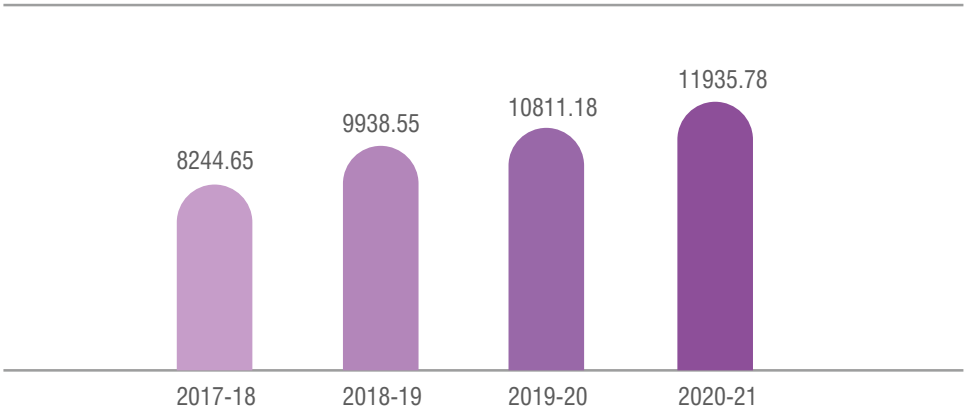
POWERGRID continues to maintain its rating of 'AAA' (Stable) at Domestic Level by CRISIL, ICRA and CARE & 'Baa2/BBB (-)' (Stable) at International Level by Moody's, S&P and Finch.

The main business segment of POWERGRID continues to be Transmission business which is the largest contributor to our overall revenue. However, we are expanding our footprints in the field of International and Domestic consultancy segment & telecom projects. During 2019-21, there have been colossal progress in consultancy assignments and telecom revenue cumulatively contributing more than ₹ 2,517 Crore to our revenue. POWERGRID achieved remarkable collection efficiency of 103.78% of billing in 2020-21, despite the ongoing COVID-19 pandemic situation in the country.

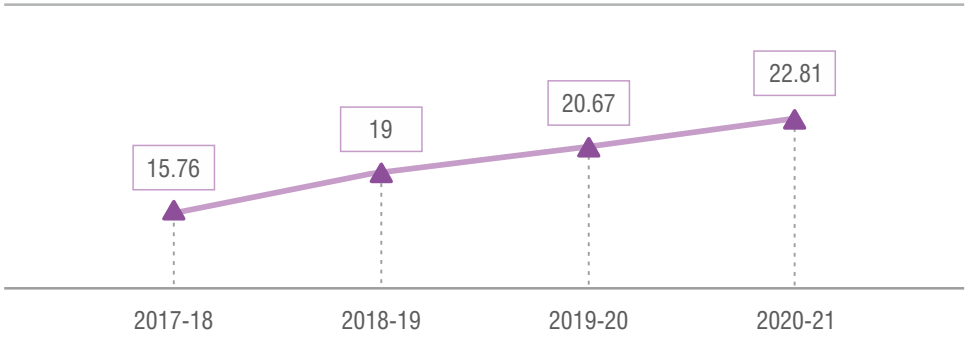
In order to mobilise resources to meet future capital requirement, POWERGRID has undertaken monetization of assets through Infrastructure Investment Trust (InvIT) model. In line with GoI directions, it is a matter of pride that POWERGRID is the first CPSE to undertake asset recycling through InvIT structure.

POWERGRID received ₹ 233.94 Crore and ₹ 107.99 Crore as financial benefits from the GoI in 2019-20 & 2020-21 respectively. Safeguarding the interest of the shareholders, POWERGRID has been consistently paying dividends to its shareholders throughout the reporting period.

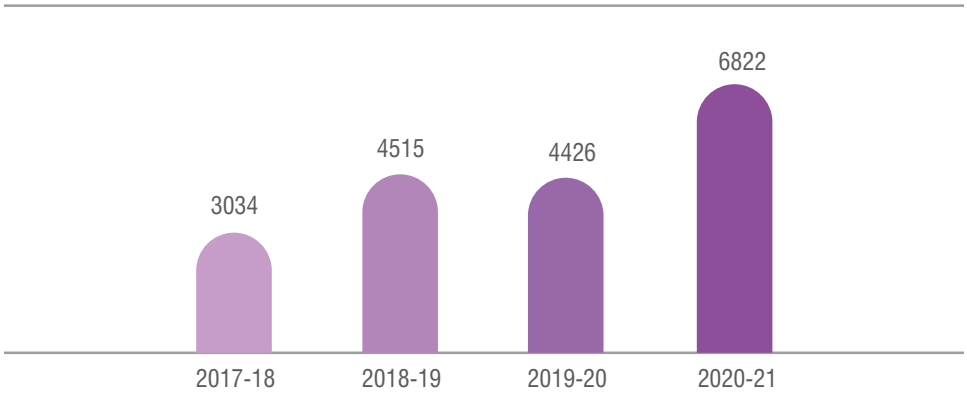
Net Profit (₹ Crore)



Earning Per Share (₹)

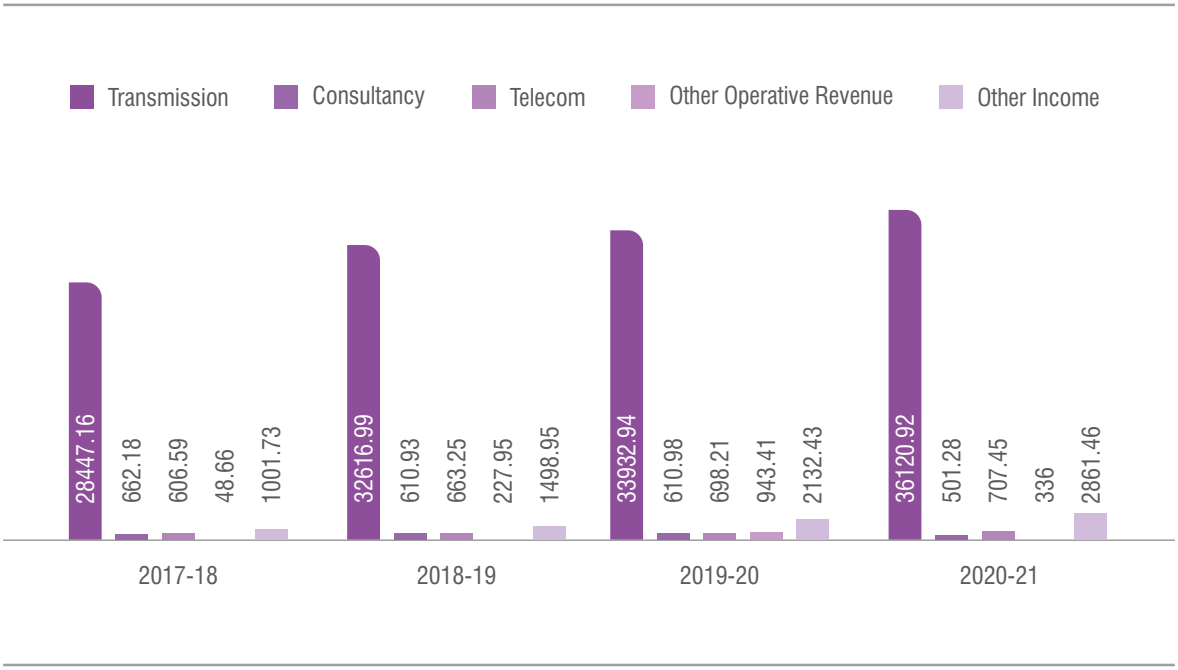


Dividend (₹ Crore)

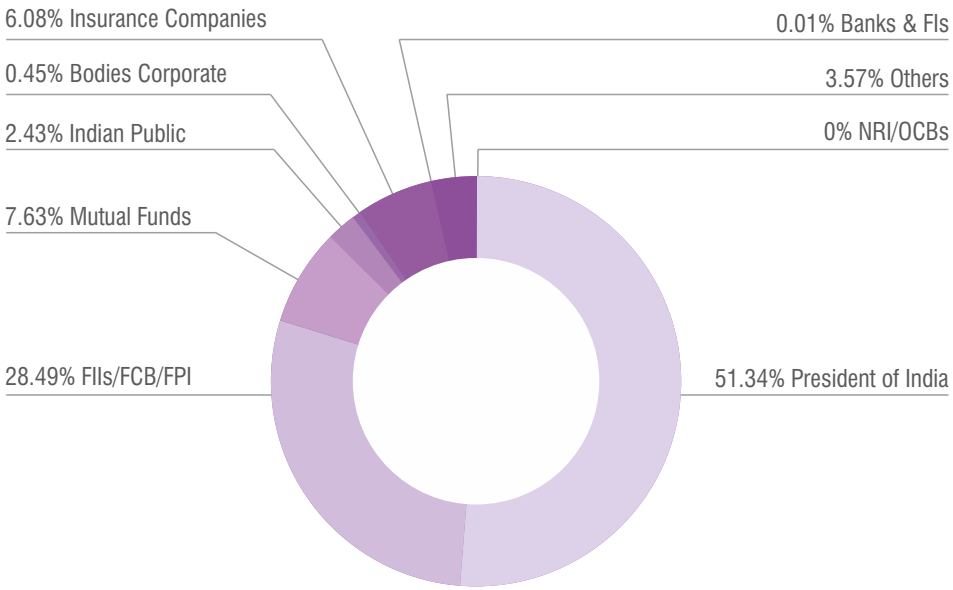


MoU singing with MoP for 2019-20

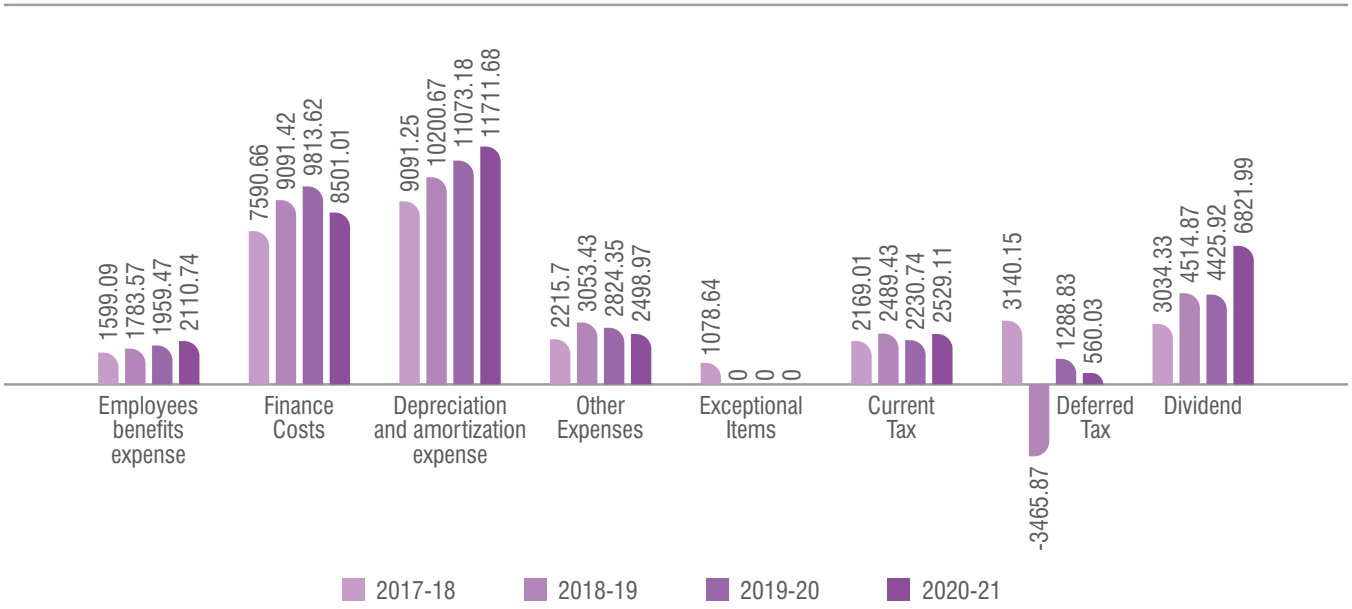
Direct Economic Value Generated (₹ Crore)



Shareholding Pattern (%)



Direct Economic Value Distributed (₹ Crore)



SOCIAL ENRICHMENT

CMD, POWERGRID conferred with National CSR Award by Hon'ble President of India

Prestigious GREENTECH & SKOCH award in COVID response category for CSR

Swachh Bharat Award by Hon'ble President of India for significant CSR contribution under the initiative of Swachh Bharat Kosh

POWERGRID's commitment towards practicing social prudence stems from the realization that the ultimate goal of any business activity is not limited to financial profitability but includes wider and much desired societal welfare. POWERGRID, as part of its corporate philosophy is committed at all levels to internalize the negative externalities associated with its business processes including social impacts. It includes minimization and mitigation of environmental impacts, addressing social issues and taking appropriate & inclusive CSR initiatives/ interventions designed to promote development & prosperity of community.

Acquiring land for the developmental projects is a cumbersome process and may have social, economic and environmental implications on the affected population. This can be on the account of the possibility of loss or depletion of productive assets, habitats, community assets etc. These impacts are, however, not envisaged for transmission projects.

LAND FOR TRANSMISSION LINES

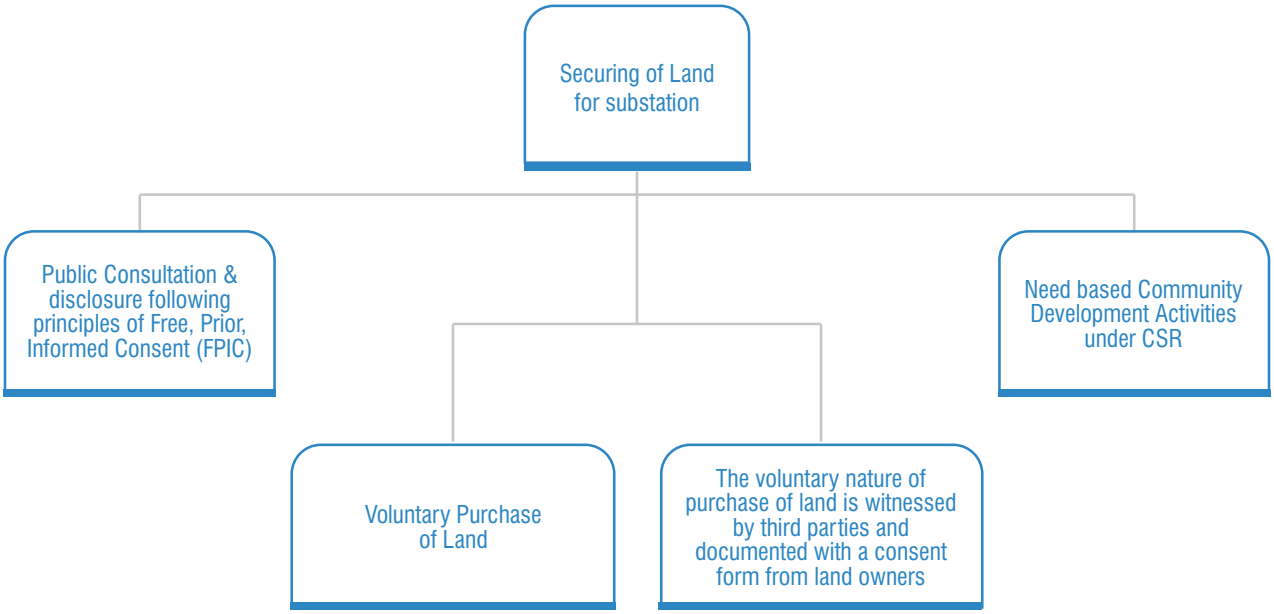
As per existing provisions, land for transmission line i.e. for tower and corridor are not acquired and ownership of land remains with the owner & is allowed to continue cultivation after construction. The provisions of Indian Telegraph Act, 1885 provides for full compensation for all the damages without acquisition of subject land while placing the tower and lines after due assessment by revenue authorities. Further, considering the effect on land value due to laying of transmission line and restriction imposed to maintain safe electrical clearance, Ministry of Power issued guidelines in Oct'15 for payment of compensation towards damages in regard to Right of Way for transmission lines. These guidelines are to be adopted by the respective States/ UTs and appropriate direction/ order have to be issued for its implementation. The prime objectives behind the issuance of these guidelines were not only to address the long pending demands of farmers/landowners for payment of diminishing value of land and making the compensation process more comprehensive but also to bring the much required uniformity in the compensation process across the length and breadth of the country. It is also worth mentioning that RoW compensation had become a major impediment in the smooth and hassle-free execution of the transmission projects. POWERGRID being a responsible government entity took immediate action towards the compliance with the provisions of MoP guidelines. The guidelines have expedited the smooth execution of the transmission projects in the states which have adopted the said guidelines. Additionally, these guidelines have revolutionized/ transformed the very basis of compensation and have paved the way for true inclusive growth.

LAND FOR SUBSTATION

The presence of a huge population on a comparatively small land mass and the resulting high population density creates various competing users for the limited land resources and as such securing land for infrastructure projects becomes challenging. Management of land issues has become a key challenge in recent times. POWERGRID through various technological interventions, like Gas Insulated Switchyard (GIS) instead of traditional Air Insulated Switchyard (AIS) has reduced the land required for its substations to the barest minimum. To minimize adverse social impact, as a firm believer in addressing the pressing social needs of the society, POWERGRID's endeavor is to secure encroachment free barren government land as its first choice, even if its location is bit remote. In case no government land of suitable dimension is available, attempts are always concentrated on selecting barren, low productivity, undulated private land instead of good/irrigated cultivable land. A multi crop agricultural land is always purchased as last resort.

As a matter of good practice and to ensure mutually beneficial stakeholder relation, POWERGRID has abandoned the practice of involuntary land acquisition by invoking provisions of "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013". Now we are securing land for most of substations through consent of landowners on mutually agreed rate on "Willing Buyer Willing Seller" basis either directly from landowners or based on policies of respective State Governments framed under relevant provisions of RFCTLARR Act, 2013. In order to properly substantiate and document voluntary nature of these negotiated settlements, it is witnessed by third parties and documented with a consent form, which contains information on the transaction, including land being transacted, size of land, value of the transaction, etc. These pro-people initiatives have not only ensured in time availability of land but also strengthened relation with our stakeholders, ensured better organizational image and enhanced transparency.

SECURING OF LAND



PUBLIC DISCLOSURE

POWERGRID initiates all project activities with active involvement of the all stakeholders. Public consultation & information dissemination is an indispensable part of our project planning and implementation. Our ESPP focuses on forging better living standards for affected population in a sustainable way, minimize information asymmetry between POWERGRID and affected people/ community & ensures a long-term symbiotic relationship.

POWERGRID considers its responsibility to ensure that all stakeholders are well informed, involved and fully understand the role of POWERGRID in building up the transmission infrastructure of the country along with our efforts towards Sustainable Development through a positive an open relationship.

All the reports and analysis are available on POWERGRID's website as well as in public information offices in all our substation and transmission line offices so that the project information is widely available, readily accessible, clearly outlines and reaches all areas and segments of the target population.

Transmission line Construction

Public Consultation for Screening, Assessment and Route/Site finalization

Consultation at Individual and community level

Resolution of issues raised during intial screening and walkover surveys

Affected person(s) compensated as per provisions/ Issues Resolved

Substation Construction

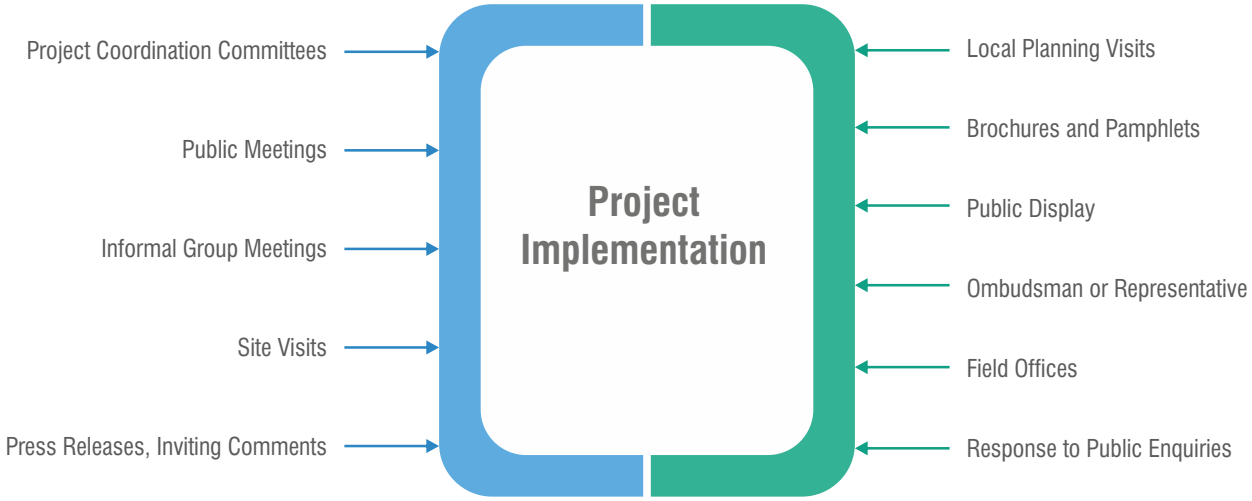
Public Consultation

Voluntary Purchase of land

Need based Community Development under CSR

Compensation to PAP as per mutual agreement

Modes & Techniques of Public Consultation



CORPORATE SOCIAL RESPONSIBILITY

Vision

To be a Corporate that sets a long term strategy for Social & Economic Development of communities through initiatives in rural development, education, skill development, healthcare and other areas of national importance & adhere to sustainable environmental practices.

Mission

To align CSR and Sustainability policy with the business policy so as to conduct business in a sustainable manner adhering to the principles of Avoidance, Minimization and Mitigation in dealing with environmental & social issues and to undertake high impact community development projects of national and local importance in consultation with stakeholders.

POWERGRID endeavours to incorporate its CSR and Sustainability policies in line with its business policies in order to conduct its business in a sustainable manner. We constantly work towards improving our social practices in order to have a meaningful impact on the society. CSR activities of POWERGRID are focused towards initiatives that promote inclusive growth and address the basic needs of the under privileged and weaker sections of the society. POWERGRID carries out various CSR activities with emphasis on Rural Development/ Infrastructural Development, Skill Development, Healthcare, Education and Environment.

POWERGRID first enacted its CSR policy in 2009, long before the CSR guidelines were issued by the Department of Public Enterprises in 2010. For complying with the revised DPE guidelines and Companies Act 2013, our CSR policy was revised in 2013, 2014, 2015 & 2021.

CSR Governance

As per the requirements of the Companies Act, 2013 and the Department of Public Enterprise Guidelines on Corporate Social Responsibility and Sustainability for Central Public Sector Enterprises, POWERGRID has a dedicated Board level CSR Committee looking after the CSR aspects of the company. As of 31.03.21, the committee headed by the CMD, comprises of three other members including one full time Director & two Independent Directors. The CSR Committee is serviced by the CSR department in all matters relating to the CSR activities of the company. A Nodal Officer at the rank of Executive Director heading the CSR Department of POWERGRID is responsible for coordinating the overall CSR activities in POWERGRID. 13 meetings of CSR committee were held during the reporting period.

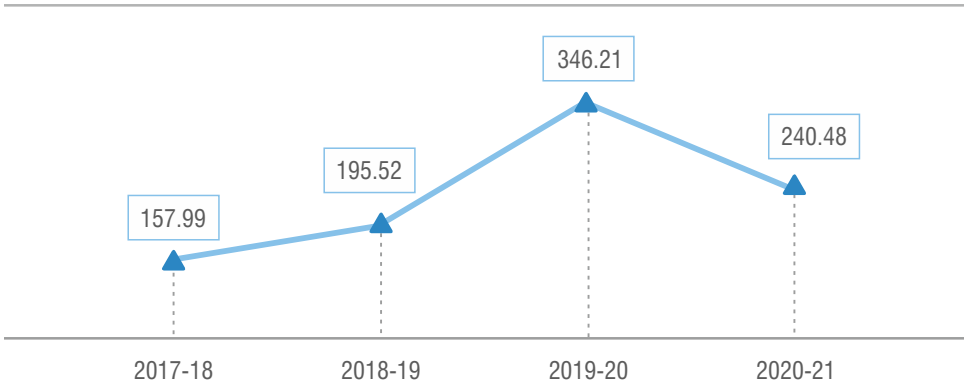
Implementation of CSR Projects

CSR activities are generally implemented in a project mode. Implementation of various activities is done through placement of award as per Works & Procurement Policy. Services of various departments of Central & State Governments, Panchayati Raj Institutions, etc. are also availed for implementation of CSR activities on deposit work basis.

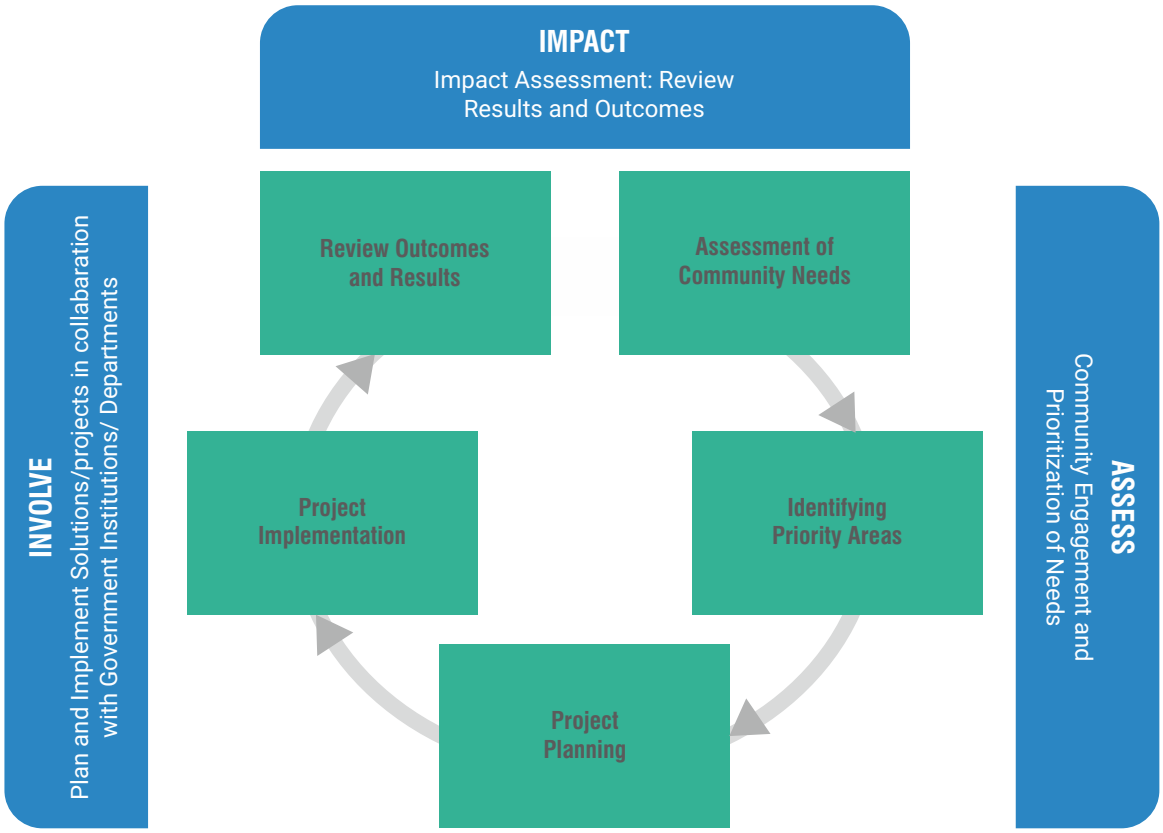
CSR activities/ projects/ programmes, are taken up in association with a registered trust or a registered society or a company established by the Corporation or its holding or subsidiary or associate company, submitted to fulfilling requirements, as mentioned in the Companies Act.

In order to assess the success and achievement of intended objectives, impact assessment by independent agency/ different authorities from different regions is undertaken. In addition, an Annual Report highlighting the projects undertaken during the year & outcome of earlier projects is also prepared and disclosed for public information, which is available on https://www.powergrid.in/csr-annual-booklet.

CSR Expenditure (₹ Crore)



CSR Project Cycle



HEALTHCARE

Investment of ₹ 343.59 Cr during reporting period

Contribution of ₹ 200 Cr to Prime Minister's CARES Fund & additional ₹ 30 Cr towards CoVID relief.

13000 PPE kits, 1800 MT Ration, 32000 Gloves, 342000 Masks, 26000 litre Sanitizer distributed.

Construction of POWERGRID Vishram Sadan at Patna & Lucknow (₹ 27.37 Cr).

POWERGRID Centre for capacity development in oncology at Dr. Barooah Cancer Institute, Guwahati (₹ 4.59 Cr).

EDUCATION

Investment of ₹ 70.55 Cr during reporting period

Construction of ladies hostel for Kerala Agricultural University (₹ 4.45 Cr).

Installation & operationalization of 330 nos. of SMART classrooms in 165 Govt. Schools in Haryana (₹ 7.87 Cr).

Upgrading 10 nos. of Army Goodwill Schools in Jammu & Kashmir (₹ 3.1 Cr).

SANITATION AND DRINKING WATER

Investment of ₹ 88.53 Cr during reporting period

One vehicle mounted sweeping machine with vacuum cleaner at Vadodara, Manali & Bhopal (₹ 5.09 Cr).

Cleaning equipment for Swachha and Bhavya Kurukshetra Project, Haryana (₹ 7.24 Cr).

Brakish water desalination RO plant at BSF Border Post, Bhuj, Gujarat (₹ 0.46 Cr).

SKILL DEVELOPMENT

Investment of ₹ 21.3 Cr during reporting period

Training of 275 unemployed youth of Damoh distt., MP (₹ 0.29 Cr).

Skill development program for 390 candidates at Hyderabad (₹ 1.11 Cr).

Supply of 100 nos. sewing machine & 5 nos. semi-automatic sanitary napkin manufacturing machine at Damoh distt., MP (₹ 0.54 Cr).

RURAL DEVELOPMENT

Investment of ₹ 49.81 Cr during reporting period

Development projects in Bhojpur, Bihar (₹ 11.09 Cr).

Integrated watershed management at Kalahandi, Odisha through ICRISAT (₹ 4.02 Cr).

Chatt Ghat and Community Centre in Dharbhanga, Madhubani, Bokaro & Giridih (₹ 2.43 Cr).

ENVIRONMENTAL SUSTAINABILITY

Investment of ₹ 13.63 Cr during reporting period

Installation of 3250 Solar street lights in various districts of Himachal Pradesh (₹ 8.29 Cr).

Installation of Solar Photo Voltaic panel of 100 kWp at Indian Institute of Forest Management, Bhopal (₹ 1.36 Cr).

Nationwide Awareness program for Energy Conservation (₹ 1.85 Cr).

HUMAN CAPITAL

POWERGRID has always prioritised its employees' well-being as one of the biggest & strongest strand to ensure & maintain a happy, efficient and productive workplace. Our human resource policies are targeted at effective development of human resources through continuous engagement by providing skill upgradation, career development and job rotation, to help the employees achieve personal and organisational goals.

We believe that our competent and motivated workforce is our core strength in delivering excellent financial and operational results, year after year. HR process and systems are designed to acquire, nurture and empower professionals in line with organizational business objectives, core values of the company in an equitable, collaborative, healthy, safe environment. Our policies have been developed at par with international best HR policies and practices, which has encouraged our workforce to stay abreast of global skills and technologies. Our employee focused culture and a constant endeavour to enhance our employee's competencies, has helped us retain highly competent employees as well as attract new talent that increasingly contributes to our growth.

National award for Innovative Training Practices by Indian Society for Training & Development

SHRM HR Excellence Award for its Excellence in Learning & Development

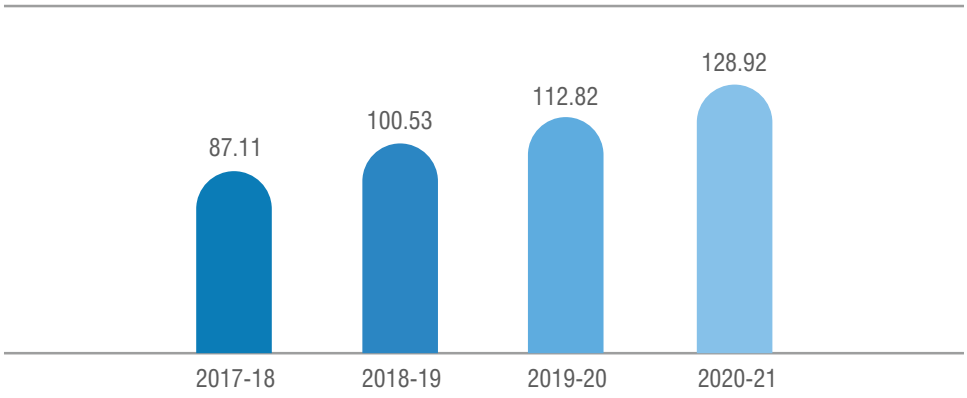
ATD Best Awards 2021 conferred by Association for Talent Development, USA

POWERGRID has been recognised at **68th** rank as India's Best Companies to Work by the Great Place to Work Institute, out of

700+

companies

Profit After Tax per employee (₹ Lakh)



LEARNING AND DEVELOPMENT

Skilled manpower is the strong foundation for success of an organization. With a view to build proficient workforce, employees need to be trained in specific skills/ functions to upgrade and update them towards the changing business environment and to effectively take on the challenges ahead. It is very important to implement latest technologies, new systems and processes to improve the productivity of the employees by optimising the use of existing resources.

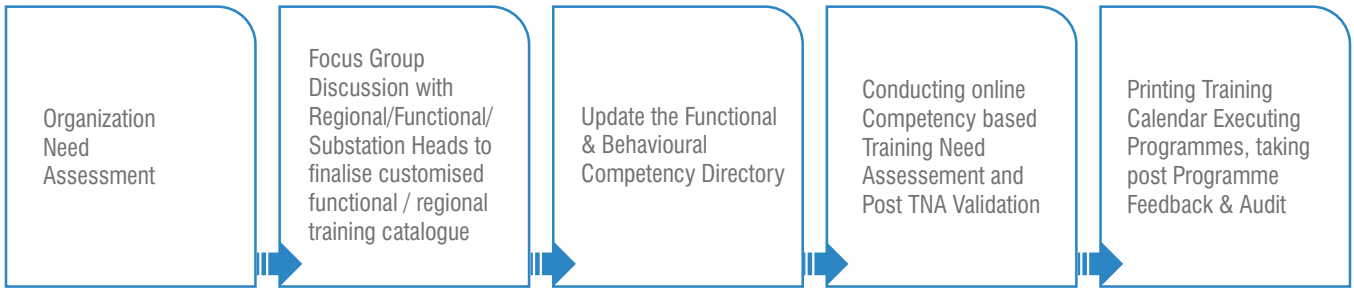
Power Sector is going to move through very competitive environment in future with rapid changes in technologies and regulatory framework which shall require a pool of dynamic manpower ready to adapt to changing environment equipped with right knowledge, multiple skill set and abilities. To navigate in such a volatile and competitive landscape, the online training management system needs to be constantly upgraded and the processes which can offer employees meaningful learning options and avenues vis-a-vis their competency & skill gaps are regularly analyzed, updated & re-engineered if needed. POWERGRID has been pioneer in several smart learning and development initiatives & its practices like online HRD Management Systems have been recognised across the industry. Human Resource Development Interventions are directed towards empowering employees with new competencies and to reinforce good work practices & change workplace behaviour as per the Organizational requirements.

Our Human Resource Development (HRD) wing has played a key role through various initiatives and interventions to create a future-ready workforce. Organizational Need Assessment (ONA) and competency-based Individual Training Need Analysis (TNA) are regularly conducted throughout the organization. These assessments help to determine individual competency enhancement requirements, on the basis of which the training programmes are designed and planned. Through this, POWERGRID has been able to link the Individual development plans (IDP) of employees as per the business requirement which helps the organization to keep updating the competencies of employees to meet current and future requirements.

An HRD Action Planner, finalized through multi-disciplinary interaction, is a strategic instrument to encounter performance challenges and develop training programmes for operational excellence and strategic value addition. Employees are trained in the respective areas based on their individual training needs and Training Plan Matrix.

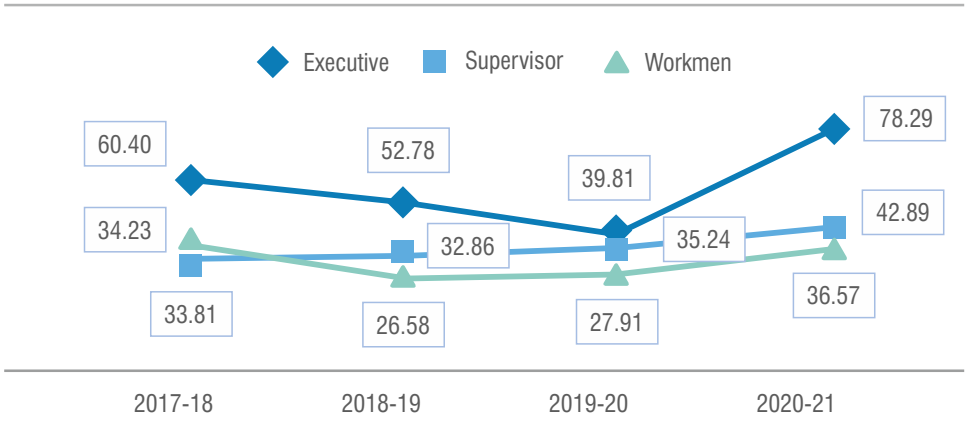
COMPETENCY BASED TRAINING NEED ASSESSMENT PROCESS

POWERGRID'S 5 STEP TRAINING ALIGNMENT PROCESS



In 2019-20 and 2020-21, the average training man days per employee were 4.66 and 7.23 respectively. The training expenditure (excluding Travelling Expenses) was ₹ 35.85 Crore and ₹ 17.78 Crore in 2019-20 and 2020-21 respectively.

Training Hours per Employee



POWERGRID Academy of Leadership (PAL), a state-of-the-art, world class Institute has been commissioned by POWERGRID at Manesar, which is providing a wide range of training including induction, hands-on, managerial and behavioural programs to employees in POWERGRID, and various power utilities at national and international levels. Such initiatives of POWERGRID have also helped in development of customers both at Domestic and International level in the field of training and development.

During the reporting period, more than 1400 training and development programs were organized through in-house facilities as well as premium educational institutes and centres of learning in India and abroad. The range of training & development imparted include induction programs to Executive Trainees besides hands-on/managerial/behavioral/leadership training programs to employees and customized programs for external agencies. Leveraging its people capabilities and infrastructure available at PAL for capacity development, training programs have also been conducted by the Company for employees of other power utilities on consultancy basis.

POWERGRID has developed an E-Learning Portal "PRAGYAN" which provides video/text-based e-learning and refresher courses on Company information. Further, first batch of 500 employees have completed the Harvard Manage Mentor Program and subsequently second batch of 500 employees has been enrolled for this program. 50 Employees have been sponsored for a customized 15 months PGDM program in Data Analytics, Machine Learning & Artificial Intelligence by IIIT Bangalore.

POWERGRID has also been accredited as Registered Education Provider of PMI, USA and 3 batches of Certified Project Management Program have been conducted online.

Basic/Advanced level online training programs on Accounting & Finance were organized by Corporate-HRD Consultancy Group under CBIS-NERPSIP Scheme for NER state utilities like AEGCL (Assam), MeECL, MePDCL, MePTCL (Meghalaya), TSECL (Tripura) etc.

More than 1000 apprentices have been engaged in different trades as per the Apprentice Act, 1961. MoU has been signed among National Skill Development Corporation (NSDC), National Skill Development Fund (NSDF), Power Sector Skill Council (PSSC) and POWERGRID for Skill development training to 6000 unemployed youth in the power Sector across 25 locations.

In order to enhance and strengthen the leadership qualities/ technical capacity of our employees, several training programmes are being taken up in collaboration with various leading institutes across the country through MoUs like IIT (Chennai), Harvard Business Publishing, ISB (Hyderabad), ASCI (Hyderabad), Fore school of Management, etc.

Along with these functional and behavioural workshops for our employees, POWERGRID also conducts workshops on Women Empowerment and Empowerment of employees by self-growth (for reserve category employees) and special programme for differently abled employees. As a part of Empowerment of Women at Workplace following Initiatives has been taken such as Professional circle for women employees as a part of community of practices, Leadership Development Program exclusively for women employees, Promotion of Women Empowerment and Rights (POWER), mentorship program for women employees, train the women trainers, etc.

POWERGRID also conducts the Transformational Leadership Programme (TLP) and Transformation Management Programmes (TMP) for its senior executives for empowering them in their career advancements. These programmes are conducted at various reputable institutions.

CAREER DEVELOPMENT

POWERGRID has incorporated an appraisal system as an instrument to manage performance and accomplish Organizational targets/ MoUs. The focus is on the developmental and not subjective aspects & the company is utilizing the appraisal system as an instrument for:-

- Performance planning, analysis and review
- Generating a healthy problem-solving dialogue between reporting officer and subordinate
- For improving communication and performance counselling
- For improving levels of motivation through goal clarity

The determination of excellence, productivity, capacity and suitability of Executives & Managers for positions of higher responsibility is done through the performance management system guided by our 'HR Policy'. Departmental succession planning is also executed in POWERGRID based on the job-rotation and retirement pattern of employees in their respective areas of work. Heads of departments are groomed and trained to assume leadership positions with posting in similar jobs or parallel orientation planning. Performance appraisals are carried out annually. The process involves setting of KRAs in consultation with seniors and followed by mid-year and year-end review. During initial years in the company, employees undergo an exhaustive programme comprising of both technical and soft skills trainings on various aspects/ functions of the company. The Middle Management executives are groomed by top management and trained in various management skills to assume senior leadership positions.

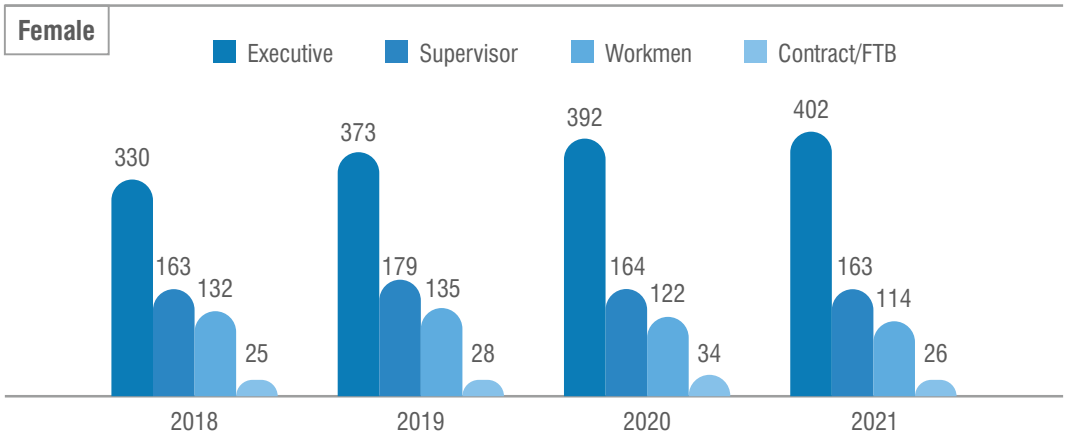
Accelerated Career Growth Scheme for non-executives is also in place to encourage employees to have learning orientation.

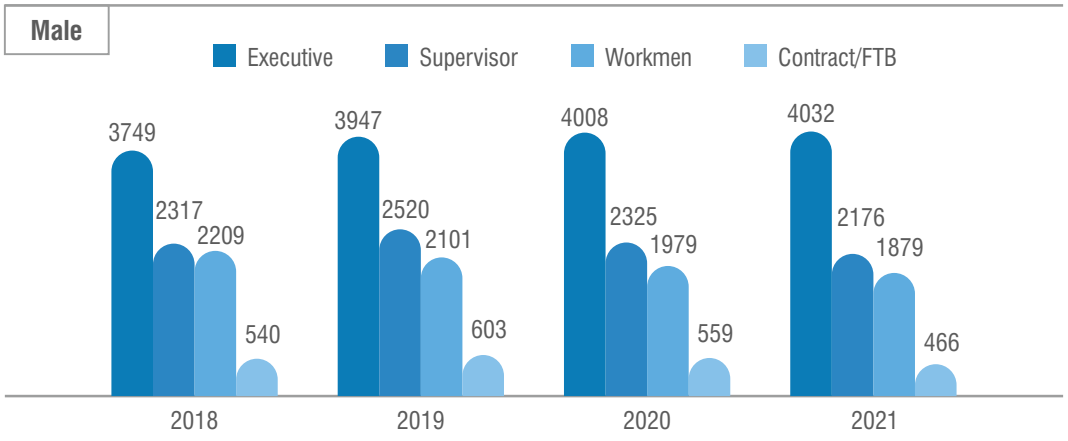
DIVERSITY AND INCLUSION

POWERGRID ensures diversity at all levels including its Board. Details of our Board members can be accessed on the website of POWERGRID and also at Report on Corporate Governance in Annual Report 2020-21. POWERGRID believes in providing equal employment opportunities to persons based on their merit and skills sets. Compensation and benefits are determined strictly as per norms and guidelines set by GoI. Rules and policies pertaining to compensation & growth opportunities are necessarily uniform for all employees as per their levels & grade of employment, irrespective of factors such as gender, age, ethnic background, physical abilities etc.

A disproportionate gender ratio among women graduating in core electrical engineering and technician trades poses a serious challenge in our efforts to improve gender representation among the workforce. POWERGRID makes all efforts to ensure an inclusive workplace and takes special measures to mitigate any difficulties faced by women employees. As a result of our efforts to make job offerings more attractive to women, the representation of women in POWERGRID has improved from 7.4% in FY 2019 to 7.62% in FY 2021 (incl. FTB).

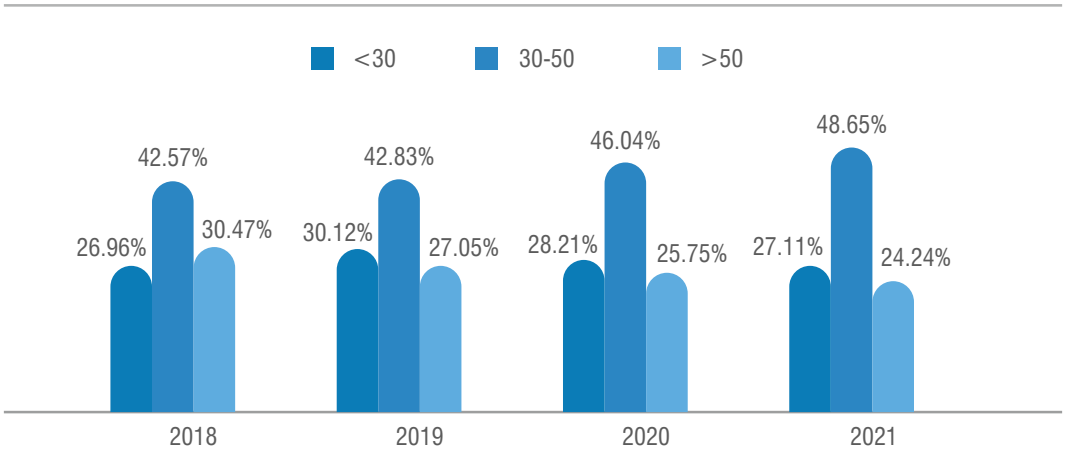
Employee Distribution by Gender (No.)





As on March 2021, the average age of our employees is 39.39 years.

Employee distribution by Age (%)



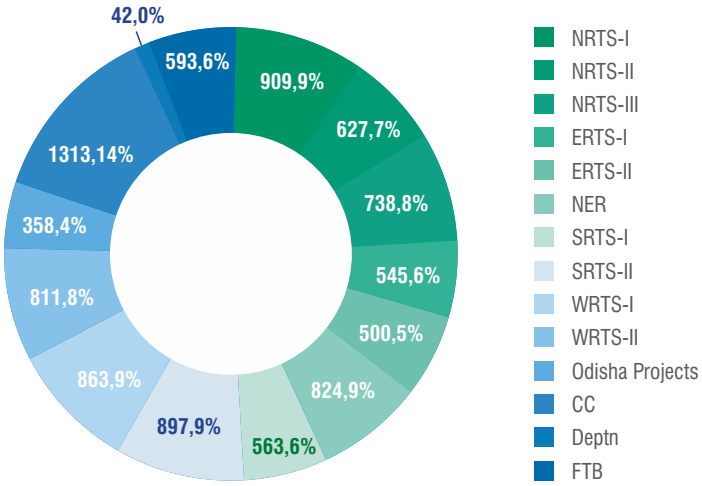
Transmission projects implemented by POWERGRID are generally spread across many locations and generally take 2 to 3 years to complete. However, we are also implementing transmission schemes under Regulated Tariff Mechanism & TBCB with a time frame ranging from 18 to 24 months. Due to the nature of activity and distribution of manpower at different locations, it is very difficult to record the exact number of man-days spent. All the core activities of POWERGRID's are carried out by permanent employees. However, only the activities such as Horticulture, Security, etc. are carried out by contract workers.

As on March 2021, POWERGRID is operating through 12 regions/ specific projects HQs, for better implementation of our policies, projects and efficient management:

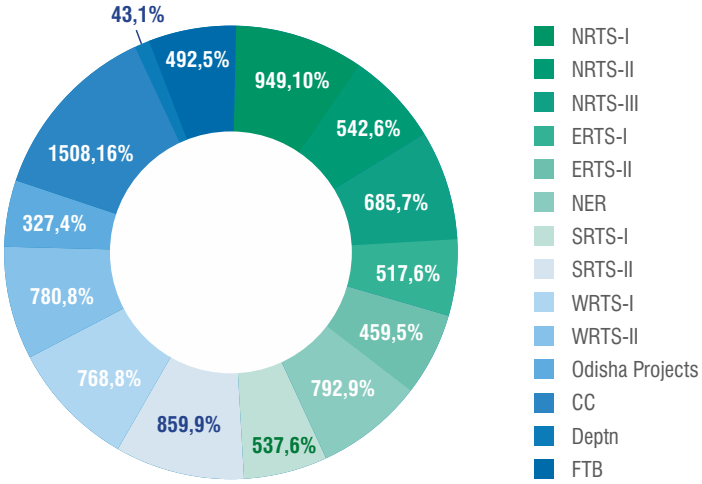
- Corporate Centre: Gurgaon
- Northern Region Transmission System I: RHQ: New Delhi
- Northern Region Transmission System II: RHQ: Jammu
- Northern Region Transmission System III: RHQ: Lucknow
- Eastern Region Transmission System I: RHQ: Patna
- Eastern Region Transmission System II: RHQ: Kolkata
- Odisha Project HQ: Bhubaneswar
- Southern Region Transmission System I: RHQ: Hyderabad
- Southern Region Transmission System II: RHQ: Bangalore
- Western Region Transmission System I: RHQ: Nagpur
- Western Region Transmission System II: RHQ: Vadodara
- North Eastern Region Transmission System: RHQ: Shillong

For overall development of employees in all functions, POWERGRID incorporates job rotation as a measure to ensure development of employees & availability of skilled workforce across all of its locations. However, in states such as J&K, NER etc., involving difficult terrains and states in which local language is dominant, employees belonging to the same state are preferably posted at locations, to ensure smooth functioning in coordination with locals.

Regionwise Workforce Distribution (FY 2020) (No., %)



Regionwise Workforce Distribution (FY 2021) (No., %)

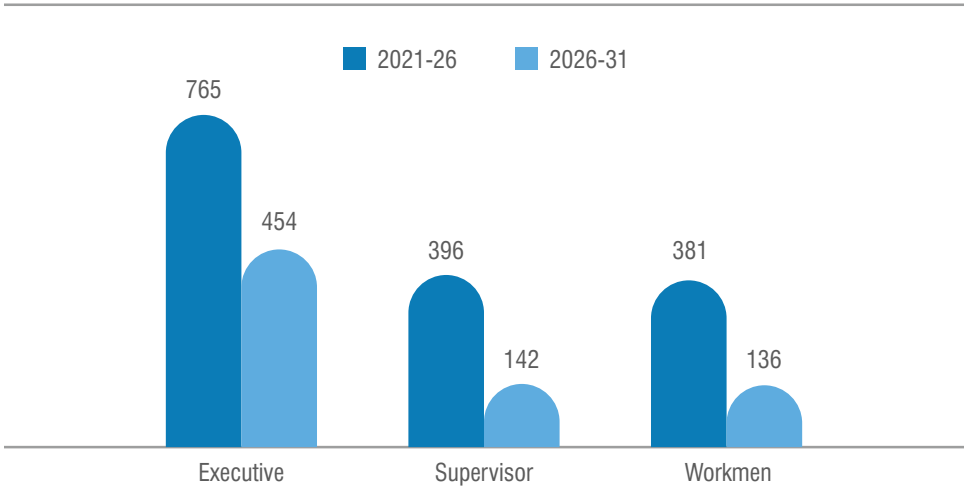


RECRUITMENT AND TURNOVER

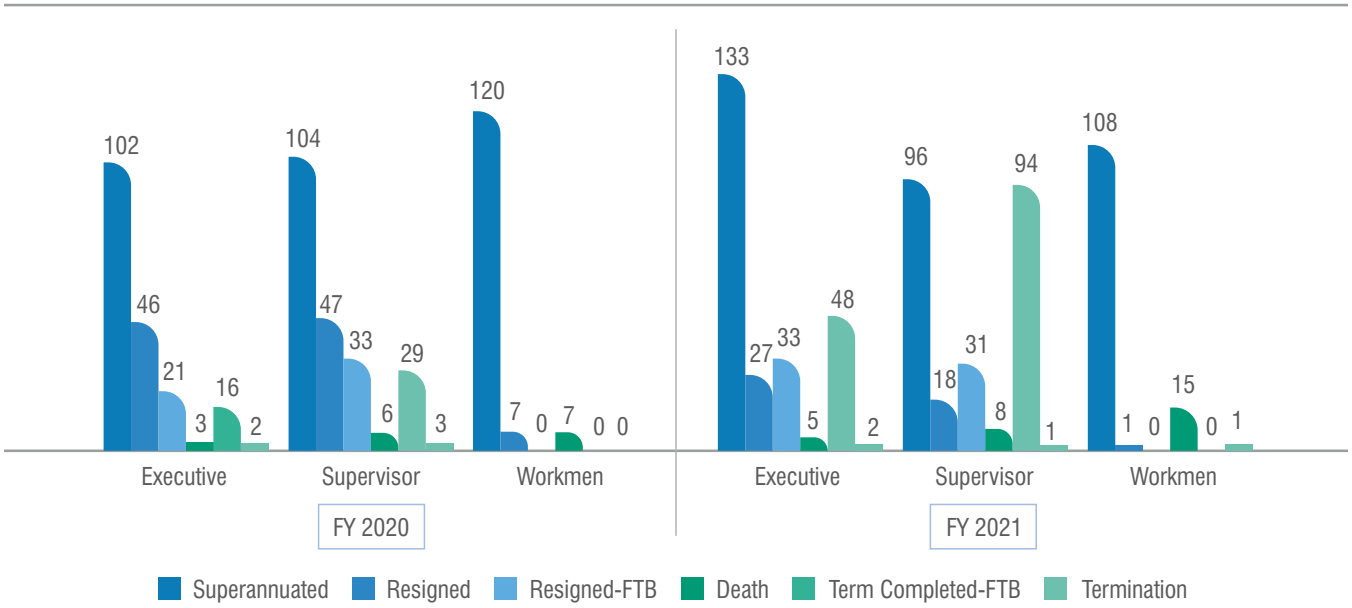
For maintaining quality, efficiency and fairness, the recruitment process of executives is centralized at Corporate Office and for non-executives recruitment is being done on regional basis to fulfil regional requirements. However, for specialized projects which requires engagement of local talent, we carry out campus recruitment drive in and around the region of operation such as in J&K etc. During FY 2020 & FY 2021, 300 & 309 new employees (including FTB) joined the company.

Our policies, best practices and the growth opportunities make us an attractive employer which is highlighted in our low attrition rate of 1.58% and 1.16% during FY 2020 and FY 2021 (including FTB), respectively. The increased resignation of employees may be attributed to locational advantages and other benefits during initial stage.

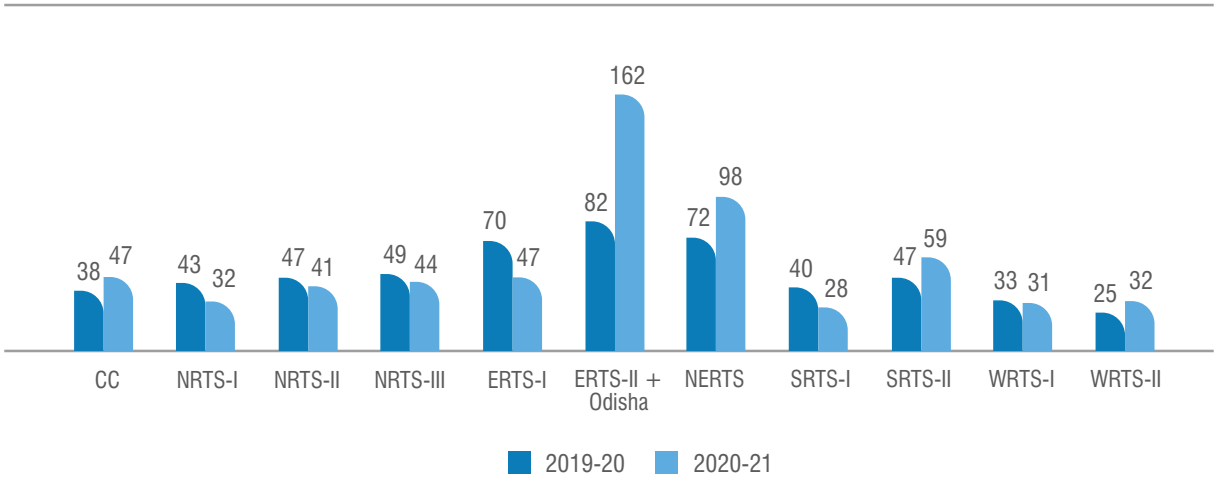
Employees due for Retirement (No.)



Employee Seperation Trend (No.)



Regionwise Seperation (No.)



WORKPLACE POLICIES

We understand that our employees also have responsibilities outside of work, hence, we provide progressive leave options including special child care leave to female employees & paternity leave to all eligible male employees, giving them the ability to have paid time off to fulfil their personal obligations. POWERGRID has also introduced a policy of Sabbatical leave to fulfil other career aspirations or taking care of social obligations.

POWERGRID strictly complies with all applicable National and State laws including those related to contract labour. Payment of wages to labour is ensured through contract provisions and regular monitoring at site level by its representatives. POWERGRID ensures that contract workers are paid wages as per local minimum wages prevalent for skill category.

POWERGRID provides superannuation benefits as per statutory requirements and DPE (Department of Public Enterprises) Guidelines. The following benefits are provided to all employees as per their entitlement:

Provident Fund is contributed by both employer & employee. The provident fund is maintained by POWERGRID Employees Provident Fund Trust. The total assets of the Trust were ₹ 3090.8 Crore and ₹ 3312.18 Crore at the end of FY 2020 and FY 2021 respectively.

Pension (Defined Contribution): The pension fund is maintained by the POWERGRID Pension Trust. At the time of superannuation, the employee may commute one third of the amount accumulated in the pension fund and the remaining amount is paid in the form of annuity to enable them to draw pension from reputed financial organizations like LIC. As on 31st March 2021, total assets of the Trust were ₹ 1337.04 Crore.

Gratuity: Gratuity is paid up to a maximum of ₹ 20 Lakhs and is paid only in case of completion of minimum 5 years of continuous service; however, this condition does not apply in case of death of employee. The POWERGRID Employees Gratuity Fund Trust maintains the gratuity account. As on 31st March 2021, total assets of the Trust were of ₹ 592.65 Crore. During the reporting period, ₹ 175.57 Crore was paid to employees as gratuity.

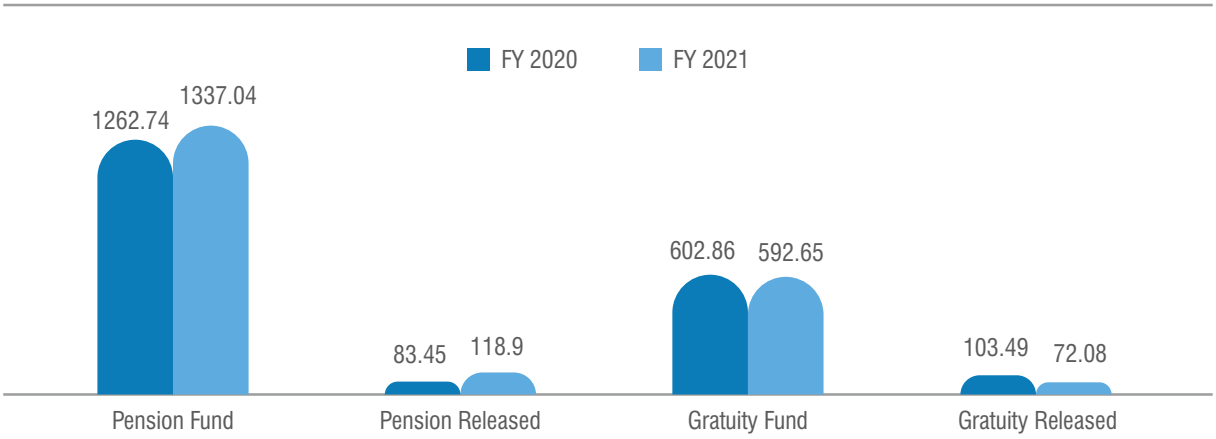
Post-Retirement Medical Benefit (PRMB) under which retired employees and their spouse & dependent parents staying with the concerned employee are provided medical facilities on making a one-time contribution. The total liability of the company on 31st March 2021 was ₹ 604.67 Crore.

POWERGRID provides many other benefits such as Medical coverage (Self, Spouse, dependent children and dependent parents), Group Personal Accident Insurance Scheme, Death Relief Scheme, House Building Advance (HBA), Conveyance Advance, Children Higher Education Advance etc. In case of death of employee, spouse and the minor children of the deceased employee are provided with medical facility and loan is written off after receipt of the outstanding amount from the Insurance Company. Dependent Children can avail medical facilities till the deemed date of retirement of deceased employee or till they reach 25 (male)/ 30 (female) years of age, whichever is earlier. However, spouse can avail medical facility lifelong.

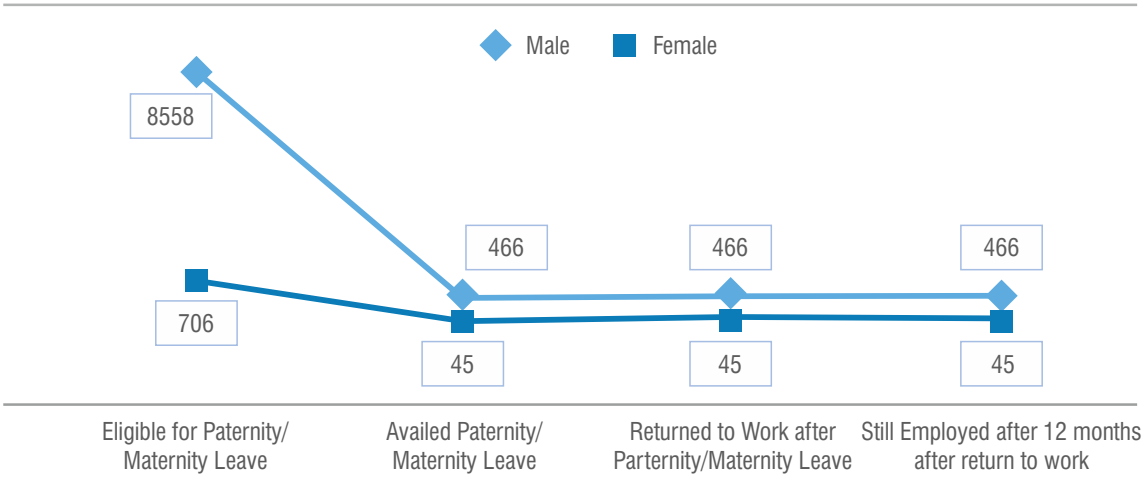
Full time employees are provided all above facilities. However, Contract/ FTB employees are not eligible for Pension (Defined Contribution), Gratuity, Post-Retirement Medical Benefit (PRMB), Death Relief Scheme, HBA, Conveyance Advance, Children Higher Education Advance and Medical Facility to spouse & dependent children in case of death of employee.

In addition to the aforementioned statutory scheme, we have also implemented various social security schemes for our employees and their dependent family members which include Economic Rehabilitation Scheme for providing monetary assistance to the beneficiary of the deceased employee in the event of death and to an employee in case of permanent total disability while in service of the Company. As per the extant scheme, the beneficiary/ employee would be entitled to monthly payment equivalent to 50% of monthly salary (Basic Pay + DA + Special Pay/ stagnation increment) last drawn by the employee till the notional date of retirement subject to certain conditions stated in the said scheme & Group Insurance Scheme to provide life insurance to all regular employees. These schemes are not applicable to contractual employees. However, such contractual employees are covered under all statutory social security schemes like EPF & MP Act, Gratuity Act, ESI Act, Employees Compensation Act, etc.

Benefits (₹ Crore)



Maternity/Paternity leave in 2020-21 (No.)



Some locations of POWERGRID are remote and involve tough terrains, require tremendous hardships and have difficult work conditions due to weather conditions. We have implemented many provisions to take special care of the employees who are posted at tough locations with benefits such as facilities of additional leave/ leave permission, retention of company quarters/leased accommodation/HRA anywhere in India for keeping family members, special leave passage for visiting family members, transfer benefits by allowing 1/3 of baggage allowance besides all other transfer facility and choice in next posting. In case of eventuality resulting in death or disability, an additional ex-gratia payment equal to 100 times (Category-2) or 50 times (Category-1) of maximum pay scale and DA is provided to employees posted in hardship areas like Northeast, Uri etc. Other monetary benefits such as North-East allowance and special allowance are also provided to employees. Extra weightage in promotion is given to employees posted in hardship locations. Free lodging and air travel are provided between certain sectors while on tour. Woollen uniforms are also provided to employees working in extreme cold and harsh weather conditions.

HUMAN RIGHTS

Human Rights issues have been incorporated in all policies & practices of POWERGRID which extend to all of our permanent and contractual employees & relative aspects pertaining to Vendors/ Suppliers/ Contractors through contract provisions/ conditions. The Conduct and Discipline Appeal rules ("CDA Rules") define the desirable and non-desirable acts and conduct for the employees. There is a laid procedure for actions in case of non-compliance with the defined terms as well as any inappropriate or unwelcome sexually-determined behaviour. To promote fair and equitable employment relationship, Grievance Redressal scheme is in place which ensures a time bound mechanism for the redressal of grievances. An Internal Complaints Committees (ICC) as per the requirement of The Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013 and Rules have been constituted to investigate all complaints of discrimination and harassment, ensuring fairness and independence in the investigation process, and respecting for the confidentiality of the parties involved. During the reporting period, 01 complaint related to such issues was received which was timely resolved.

POWERGRID promotes awareness of the importance of respecting Human Rights within its value chain and discourage instances of abuse. Besides conducting technical and behavioral trainings, the training on Human Rights issues to sensitize people towards women, the differently-abled and the socially weaker sections of the society have also been imparted. In order to create awareness regarding female employees' rights, exclusive training/ workshop programs on law relating to sexual harassment, women empowerment and development, including programs on gender sensitization are organized.

POWERGRID has also been certified with Social Accountability standard SA 8000 by BSI since 2007 for its human resource and labour management policies and practices. Vendors/Suppliers/Contractors are required to comply with the provisions of the labour laws/ Human rights etc. through stipulations in the conditions of contract. As per the Contract agreement, contractors are prohibited from subjecting their workers to forced or compulsory labour. All contractors are required to comply with various compensation and regulatory acts. All POWERGRID suppliers have to conform to General Conditions of Contract and SA 8000 clauses. POWERGRID takes declaration regarding Social Accountability from the bidders/ contractors for compliance of all requirements of Social Accountability Standards i.e. SA 8000, this declaration forms part of the contract documents. Provision of penalties for non-adherence of the same are also included in the contract conditions. **We are pleased to report that no incidence of violation of any of the human rights has been reported during the reporting period.** Moreover, in line with SA 8000, child/ forced/ involuntary labour is completely prohibited in all establishments of POWERGRID, irrespective of the nature of work.

GRIEVANCE REDRESSAL

Grievance redressal is always taken-up on priority in POWERGRID. Both employee grievance and public grievance are given utmost importance and all possible efforts are made to resolve for timely resolution. A dedicated team is in place for monitoring of grievances and addressing them timely and impartially under strict & unbiased framework after thoroughly analysing the facts and data. POWERGRID is redressing the grievances within the broad parameters of guidelines enumerated by GoI and policy framework. An 'Employee Grievance Portal' is also in place. The employee grievance is accorded top priority and the Company has a 3-tier structure for expeditious resolution of grievance within the broad framework of policy guidelines. Such transparent and timely resolution of grievances has led to increase in employee satisfaction and lower attrition rate. Complaints raised by the workmen are also resolved through the National and Regional bipartite Committee (PNBC/ PRBC). Issues related to harassment of women are resolved through Internal Complaints Committee as explained above.

POWERGRID has constituted a separate Reservation cell at Corporate and Regional levels to look after and safeguard the legal provisions for SC/ ST/ OBC & Persons with Disabilities (PwD) categories of employees. The reservation cell assists the Liaison Officer who looks after the welfare & safeguard of SC/ ST/ OBC & PwD employees. Liaison Officer also ensures that there is no discrimination on the basis of caste, religion & disabilities amongst the employees. POWERGRID implements all directives and guidelines with regard to reservation policy issued by GoI. An Annual inspection is also conducted to ensure implementation of directives issued by GoI. Periodic meeting is also held with representative of the association of SC/ ST and OBC to resolve issues, if any. During the reporting period, no grievances were received related to environment issues, labour practices, indigenous people, human rights and discriminatory employment.

EMPLOYEE ENGAGEMENT & WELFARE

In order to address the changing business environment and to meet the requirement of the employees, POWERGRID is continuously working on framing new welfare strategies and upgrading the existing ones. Considering health as one of the key issues for ensuring well-being of employees, we have empanelled nearby hospitals and establishments for healthcare of employees and their dependents.

During the reporting period, due to COVID-19 pandemic, POWERGRID introduced work from home guidelines for employees and has taken various measures for smooth functioning during COVID-19 situation. Many webinar/ talks were held during the period by experts for employees on medical care, wellbeing and lifestyle management during the pandemic. Isolation facilities were setup at various locations for affected employees and dependents. Various facilities viz. home collection of samples for COVID-19 testing, medical consultation through telemedicine and provision of non-refundable advance to members of the PF-Trust, supply of food and other essentials to affected families were introduced.

A dedicated COVID Communication webpage/ web repository created on Intranet for easy access and dissemination of information related to COVID-19 issued by POWERGRID and Govt. authorities including various circulars, guidelines, SOP's, Do's and Don'ts etc.

For recognition for outstanding efforts of individual employee, POWERGRID has introduced comprehensive reward and recognition scheme – **PRATIPHAL** (POWERGRID Rewarding & Appreciating Teams & Individuals by Promoting Higher Accomplishments and Learning) to promote and reinforce achievement oriented high-performance work culture.

POWERGRID has managed to establish an efficient work culture through empowerment, transparency, decentralization and practice of participative management. Cultural programmes celebrating various occasions like Diwali, Holi, New Year etc. are organised in all establishments of the company periodically to promote healthy community living. Sports are also promoted and employees are encouraged to participate in various sports competitions to enhance their interest in physical activities via various intra and inter-regional level events for Kabaddi, Cricket, Volleyball and Badminton etc. POWERGRID regularly participates in Inter-PSU Sportsmeet and our players have performed consistently throughout in events like Table Tennis, Cricket, Carrom, badminton and Kabaddi and have bagged several awards.

COLLECTIVE BARGAINING

POWERGRID activities have been classified as Public Utility Service under the Industrial Disputes Act, 1948. Since the inception of the company, POWERGRID's management has facilitated workmen to exercise the right of freedom of association and collective bargaining through the functioning of the POWERGRID National Bipartite Committee (PNBC). PNBC is an apex level joint consultative forum comprising of management and workmen representatives. Unions represented in the PNBC are selected through an Election Process – Secret Ballot. PNBC provides a platform for addressing issues related to the workmen category at the national level. Regional/ local level issues are addressed in the POWERGRID Regional Bipartite Committee (PRBC) and Sub-station level Joint Committees. All the workmen are covered under collective bargaining agreements (23.37% in 2019-20 and 22.73% in 2020-21). The forum has also been instrumental in communicating company's vision, business plans, core values and important business developments upto the grass root level.

National Level issues are discussed in the POWERGRID National Bipartite Committee (PNBC); any changes applicable to workmen are done after detailed deliberations in the PNBC. During the reporting period, the IR scenario in the corporation has been cordial and no man-days have been lost due to strike. Moreover, POWERGRID's operations do not involve any such issues in which the right to exercise freedom of association and collective bargaining may be at significant risk.

Health and Safety is one of the key aspects in POWERGRID and the same is a part of Wage Agreement with Unions. All the statutory compliances on Health and Safety during construction activities and operations are taken care by specialized Safety Officers in the organization. POWERGRID is SA 8000 certified organization which encompasses the Health and Safety related compliances. Also, compulsory training in respect of Health and Safety by certified and recognized authorities are carried out in the organization involving the Union Representatives and their respective members.

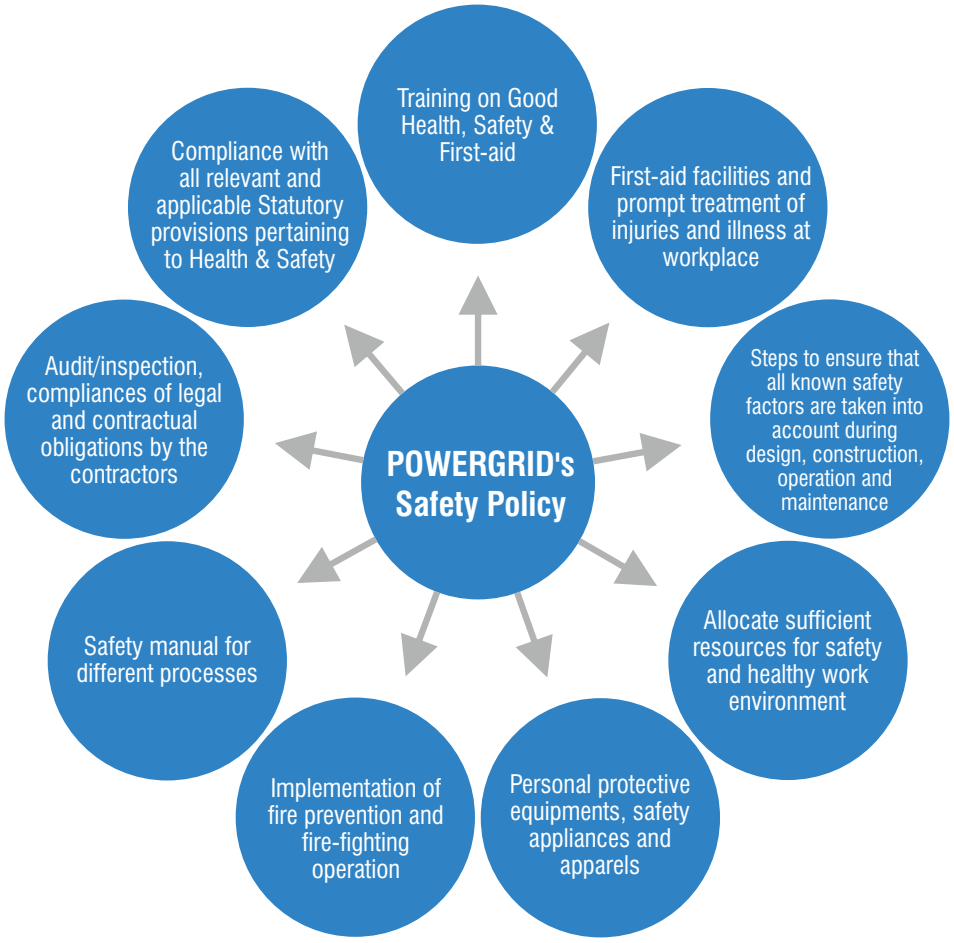
	Promoting Right to Exercise Freedom of Association and Collective Bargaining
Initiatives	Regular PNBC, PRBC & S/s Level Joint Meetings
	Training of Union Leaders
	Behavioral / soft skills training programs for workmen

WELLBEING, HEALTH & SAFETY

In line with our mission statement, POWERGRID's management has defined our Safety Policy that dedicates our safety performance and strives towards zero accidents. POWERGRID is committed for maintaining a safe working environment for all its employees and ensuring best possible safe conditions of work, for which all necessary steps are taken to ensure that all known safety factors are considered during design, construction, operation and maintenance of machinery & equipment of Substations & transmission lines as applicable as per standards.

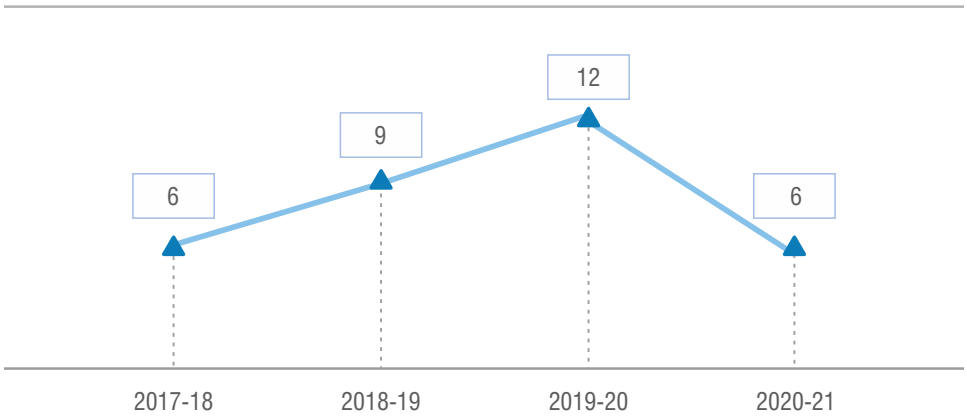
POWERGRID is certified with ISO 45001:2018, Occupational Health & Safety Management System which ensures a healthy work environment for employees by strict adherence to norms on occupational health & safety at workplace. Regular monitoring and review of performance in the field of ensuring safe work practices is done. Designated safety officers at the grass root level ensure the implementation of the safety policy.

Safety is given due importance with a three-tier setup (Corporate Centre, Regional and Site levels) in POWERGRID for implementation of safety policy, rules and guidelines, which are monitored continuously. A Safety Cell is already in place to coordinate promotion of all safety aspects & accident prevention related activities of transmission lines & sub-stations and to provide technical support to site offices for ensuring proper implementation of the safety policy & procedures of the Company. Safety policy is implemented by publishing/ notifying instructions, notices in hindi, english and other vernacular languages for broader circulation. The contractual provisions for safety are reviewed and amended to augment the safety commitment by all working agencies with their feedback. Safety audits/ inspections, trainings, safety briefings, mock-drills are carried out for all contract workers and POWERGRID staff at various O&M and construction sites. POWERGRID values full compliance with all relevant laws and regulations and the principles of safety, health & environment in its relations with its bidders/ contractors. In order to achieve these goals, POWERGRID and the bidders/ contractors enter into an agreement called Safety Pact which forms part of bidding documents. Further, contractor is required to submit safety plan before commencement of any work to comply and adhere all Safety measures applicable as per laws and are bound by contract terms and conditions.



POWERGRID has a dedicated APEX SAFETY BOARD, with CMD as Chairman and the functional Directors as members, at the corporate level that periodically reviews the safety performance of all regions. Accidents are reviewed in details by the Apex Safety Board and corrective actions/ additional measures are advised to prevent their recurrence. The senior officials of construction agencies are also called to present the reasons for accident and the corrective actions taken/ action plan proposed to prevent recurrence of such incidents. Review Meetings/ Safety/ Vendor Meets are held at Corporate/ Regional level wherein the Regional/ Project In-charges/ Executives of POWERGRID as well as the Construction Agencies are invited to discuss the Safety related issues. At the substation level, the station in-charges hold monthly meetings with the worker representatives where in the safety issues are also discussed. In addition, safety issues, if any, are also discussed in PRBC at Regional level and PNBC at Corporate level.

Apex Safety Meetings (No.)



A detailed procedure for Reporting of accidents, Investigation and Analysis has been established and made part of the POWERGRID systems and operations. Standing Committees have been identified in all Regions to enquire into the Accidents. A member from Corporate Safety cell associates with the Enquiry process in case of fatal accidents. The standing safety committee suggests preventive/ remedial measures to avoid reoccurrence of such incident in future. All incidents/ accidents reported by the Construction Agencies to POWERGRID, are put up to the Senior Management at Director Level. A summary/ recommendations of accident enquiry committee report are circulated to all Regions to create awareness amongst all employees and to avoid the reoccurrences.

Major decisions like change in technical specifications i.e. stopping use of tractor in tower erection and stringing, use of power operated winch machines in place of tractors, use of sagging bridge/ platform for final sagging etc. has been taken to reduce the safety related accidents. Further, many initiatives have also been taken during reporting period such as collecting of approved/ planned Shutdown works for O&M sites from RTAMC in order to discuss the planned work & safety precautions on the day of execution by Regional Safety Cell, VC discussion with site in-charge regarding safety precautions to be adhered/ adopted for safe execution of work, surveillance safety inspection & monitoring of various shutdown activities in the sub-stations using VMS Camera at RTAMC, etc. Compensation and penalty on contracting agencies in case of accidents has been imposed as deterrent measures.

All contractors are required to comply and adhere to POWERGRID Safety Rules & applicable laws and are bound by contract terms and conditions. The Project Manager monitors the health and safety conditions provided by the contractors to the workmen. Contract clause have provisions for penalties to be imposed on the Vendors/ suppliers/contractors in the event of breach of the said provisions. To convey the importance of safety practices during work, the Safety Officer/ Site Supervisor carry out daily safety briefing before start of work to warn against imminent dangers and precautions to be taken. Periodic Mock drills are conducted in O&M/ construction sites to educate the workers/ employees about emergency preparedness under various circumstances.

Trainings are conducted on many aspects of health & safety such as safety in construction of line & substation, safety management in transmission system, safety practices in O&M of substation, rural electrification works and safety, stress and health management, fire safety, first aid etc. Moreover, POWERGRID also undertakes awareness programs for labour on serious diseases such as HIV, Cancer etc. Safety training to POWERGRID employees and contractor's employees are imparted by safety officers and other external faculties to familiarise employees with safety aspects. Safety demo is also organised at construction sites and transmission system under O&M.

Video films on “Safety” and “Health & Hygiene” have been made in English, Hindi and other Regional languages such as Bengali etc., and circulated to all sites for promoting general awareness of the workers. During reporting period, more than 1800 mock drills, 950 site inspections, 3900 safety-training sessions for contractual employees was carried out. More than 3500 training programs on health and safety were organized during the reporting period which involved participation of more than 75000 man-days.

Major decisions like change in technical specifications have been taken to reduce accidents. Further, the provisions of Safety pact as a part of the bidding documents, Workmen Compensation policy and other contract provisions related to health and safety of workers are being implemented in true spirit. 100% of our employees and contractors' employees working on our site undergo job related safety training. During the reporting period, there were 17 fatalities and a total of 388 man-days were lost. Due to the various measures adopted, the fatalities have been reduced by more than 27% over the previous reporting period.

YEAR	NO. OF FATAL ACCIDENTS	NO. OF NON-FATAL ACCIDENTS	TOTAL PERSONS AFFECTED	
			NO. OF FATALITIES	NO. OF INJURIES
2019-20	09	01	09	05
2020-21	07	06	08	08

Director (Ops.) administering Safety Oath


Blue Sky

ENVIRONMENTAL STEWARDSHIP

Reduction in involvement of forest progressively from 6% in 1998 to 1.34% in the reporting period

POWERGRID views Environmental Responsibility as a business imperative inspite of the fact that its activities are non-polluting in nature and do not involve disposal of any pollutant in land, air or water nor do they involve any large-scale excavation resulting in soil erosion and its contribution towards environmental pollution is minimal. POWERGRID, which is committed to achieve the goal of Sustainable Development has realized that given the scale of its operations, it is inevitable that there may be some impacts on natural environment. To address these issues, POWERGRID has taken pro-active approach and developed a comprehensive and written **"Environmental and Social Policy & Procedures" (ESPP)** way back in 1998 through nationwide consultation. The provisions of ESPP were further upgraded and modified in year 2005 and 2009 to keep it updated in line with the changing regulatory regime and expectations of Multi-lateral funding agencies.

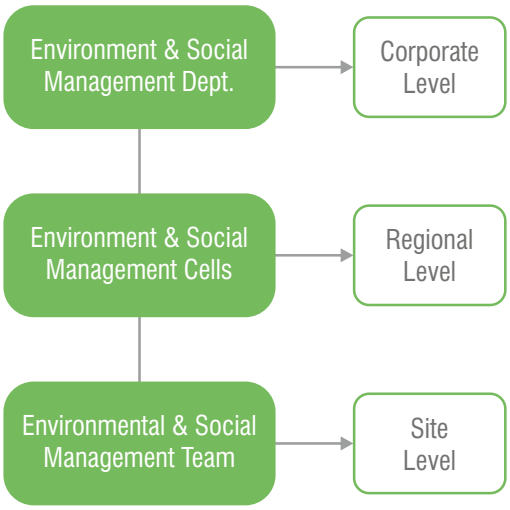
ESPP outlines our approach and commitment to deal with environmental and social issues and lays out management procedures & protocols to address the same. It lays down framework for identification, assessment and management for environmental and social concerns at organizational & project level on the well tested principles of **Avoidance, Minimization and Mitigation** with provision of restoration too. Certifying the detailed and comprehensive coverage of POWERGRID's ESPP, two leading Multi-lateral agencies of the world i.e. The World Bank and the ADB have recognized and accepted it under their policy of **Use of Country System (UCS)** and **Country Safeguard System (CSS)** in 2009 and 2017 respectively, which is **not only a unique distinction, but also has no parallel in the world.** ESPP has also appreciated and recognized by other multilateral agencies like AIIB, KfW, IFC etc.

As a environmentally conscious Company we go beyond the mandate of land of law and undertake detailed Environmental & Social Assessment of its projects in line with provisions of ESPP. Another important feature of ESPP is to develop project specific Environment Management Plan (EMP) listing all possible E&S impacts associated with the project and their possible mitigation measures with clear responsibility allocation. The EMP so finalized

is made part of contract condition to ensure its proper implementation even by the contractors. **These initiatives have not only ensured that we stay ahead of country's regulatory requirements, but have created a positive public image of environmentally conscience Company.**

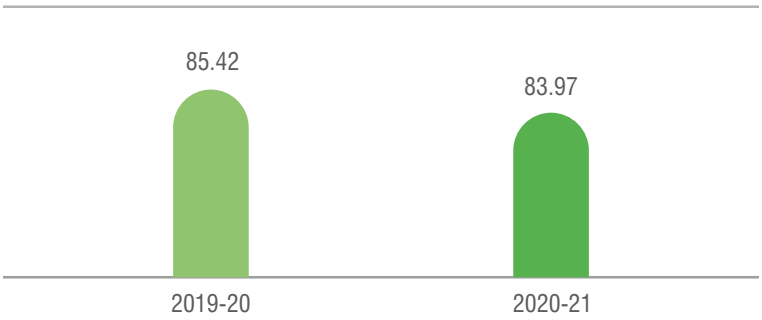
POWERGRID has also shown a firm commitment to fully comply with all international environmental treaties, which have been ratified by Govt. of India and are applicable to our projects and activities. These International treaties and obligations & the corresponding laws/ rules/ regulations enacted by Govt. of India have been integrated in our Environmental and Social Policy & Procedures (ESPP) and also in our tender documents, thus, making them obligatory to be complied with in true spirit.

We have a dedicated Environment and Social Management Dept. (ESMD) at the Corporate Level headed by an Executive Director and supported by professionals with Technical, Social and Environment expertise. This department steers the Environment and Social Management Cells (ESMC) at Regions & Environment & Social Management Teams (ESMT) at sites.



Our commitment towards environment protection is evident from the fact that we have incurred an expenditure of more than ₹ 169.39 Crore as compensatory levies, implementation of EMP, plantation etc. during the reporting period. We are pleased to report that no major issues were reported relating to non-compliance with environmental laws and regulations.

Environment Protection Expenditure (₹ Crore)



Environmental Protection Expenditure

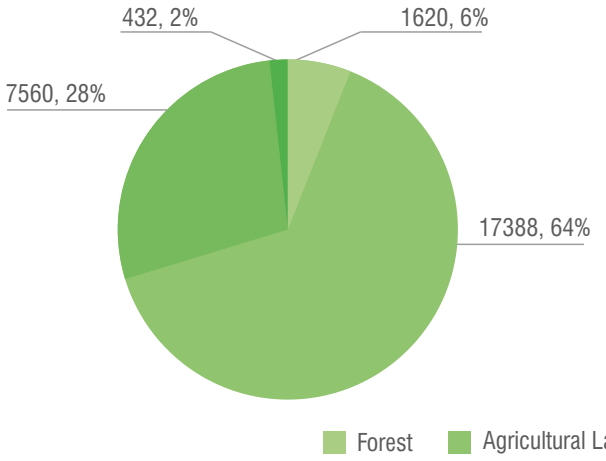
S.No	Description of Protection measures	Cost Incurred (₹ Crore)	
		2019-20	2020-21
1	Plantation activity undertaken at Substation (No./ ₹ Crore)	289237/ 1.48	374694/ 0.9
2	Cost of Compensatory afforestation (CA), Net Present Value (NPV), Wildlife Management Plan, supervisory charges, tree cutting cost, Medicinal plantation and any types of expenditure as per forest clearance	80.19	77.28
3	Installation of Rain water harvesting system	1.05	1.85
4	Implementation of EMP/ Certification	2.70	3.95
	Total	85.42	83.97

AVOIDANCE OF ECO-SENSITIVE AREAS & CONSERVATION OF RIGHT OF WAY

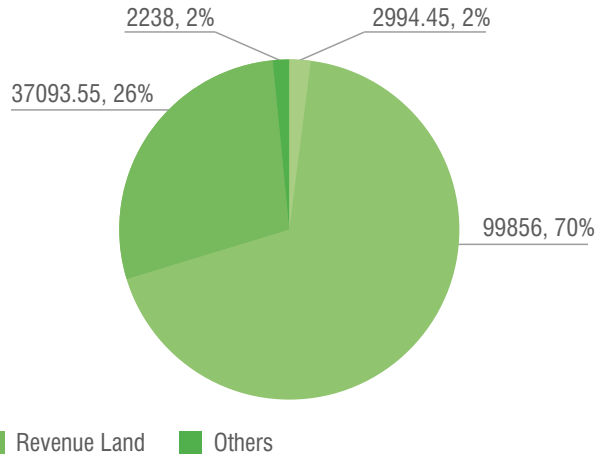
POWERGRID being a responsible corporate entity addresses any residual environmental or social impacts associated with its business following the cardinal principles of Avoidance, Minimization and Mitigation as outlined in its Environmental and Social Policy & Procedure (ESPP). In doing so, we leverage the role of technology by not only adopting the existing modern technological tools and technologies developed in different parts of the world but also emphasize on in-house technology development meeting the national requirements.

POWERGRID is fully conscious of the need to conserve natural resources and avoid ecological sensitive area, eco-sensitive zones, forest, sanctuaries, national parks, tiger/ biosphere reserves and CRZ areas as far as possible through optimization of route alignment. During the project inception stage and finalization of route alignment stage itself, ecologically sensitive areas such as Forest and Protected areas are avoided/ minimized to the extent possible, even if it involves increase in the length of the line and consequently increase in the cost of the project. This was evident in many cases in which protected areas have been completely avoided such as avoidance of protected areas (Manali WLS, Nargu & Khokhan WLS, Saraswati Conservation Reserve, Bir Bunerheri WLS, etc.) during preliminary routing stage of lines associated with Leh Solar Project at the time preparation of Detailed Project Report. Similarly, following the basic principle of avoidance & minimization, involvement of forest has been reduced progressively from 6% in 1998 to 1.34% in the reporting period.

Land Use Till 1998



Land Use from 1998-2021

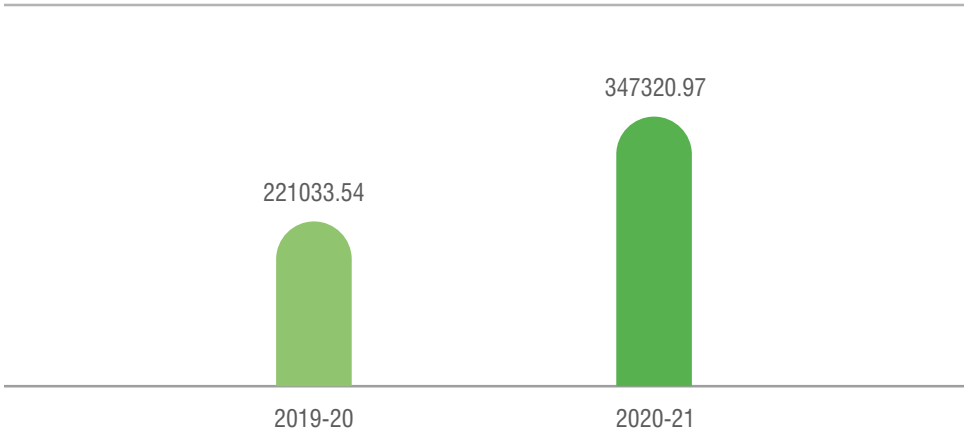


It may be appreciated that in spite of best efforts, complete avoidance of Forest / Protected Area could not be possible in few cases due to peculiarity of terrain and geographical constraints. In all such cases, the mandatory approvals/ clearances as per the provisions of the Forest (Conservation) Act, 1980 and the Wildlife (Protection) Act, 1972 are obtained before the start of work in such areas. As transmission projects are environment friendly, they have been kept out of purview of Environmental Impact Assessment Notification of 1994 and 2006 & do not require prior Environmental Clearance under Environmental Protection Act, 1986 unless they are passing through notified areas of Alwar, Mewat & Gurgaon distt. as per Aravalli Notification of 1992.

In our country, the availability of land resource is scarce and conflicts related to land resources are not uncommon due to presence of different competing user groups. POWERGRID, as a firm believer in addressing the land requirements, has always been forthcoming in up gradation and adoption of new and better technologies such as Gas Insulated Switchyard (GIS) which requires about 1/4th area compared to the traditional Air Insulated Switchyard (AIS).

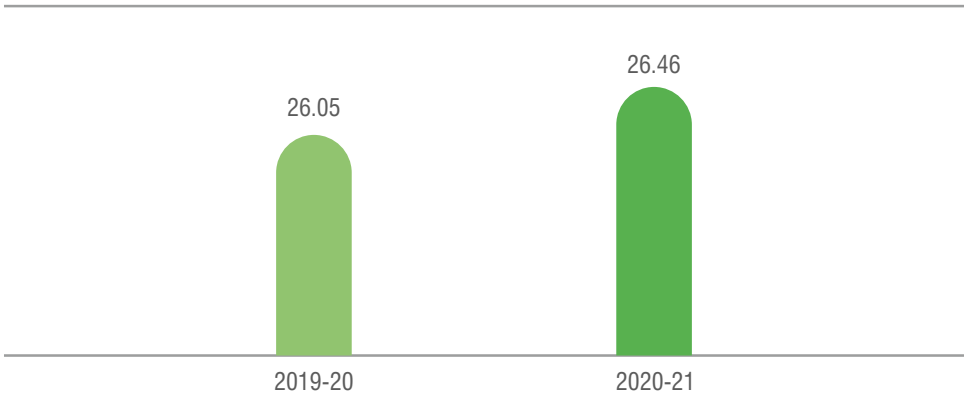
One of the major initiatives taken by POWERGRID towards conservation of Right of Way (RoW) is its optimization through development and adoption of innovative tower designs such as special compact tower, pole type tower, Multi-circuit towers etc. Further, reconductoring of many lines is also being taken up to enhancing the power carrying capacity of existing lines though replacement of existing conductor with high capacity conductor. These technological interventions not only reduced the requirement of precious land resources and social risks to projects but also helped in preservation of environment by minimizing forest and vegetation involvement. Reconductoring of existing lines has helped in saving of significant forest and tree cover which might have been affected, if new lines were to be constructed for such enhanced transmission of power. Further, construction of High Capacity Power Transmission Corridors (HCPTCs) for transmitting power at higher voltage levels (765 kV HVAC, +-800 kV HVDC) not only reduced transmission losses but also ensured transmission of more power per unit of RoW (MW/meter of RoW).

RoW Savings due to Construction of 765/800 kV Lines ('000 sq.m.)



Cumulative transmission capacity (MW) per metre width of RoW within forest areas

(Base Year 2004-05)



CLIMATE CHANGE

Power transmission projects are not carbon intensive as they don't involve any chemical processes and accordingly don't use any fossil fuel. Hence, carbon footprint of POWERGRID at an organizational level is minimal. Rather, our assets are vulnerable to risks associated with the changing climate and its impacts like increased frequency of cyclones, hurricanes etc. and also increasing pollution level. Realizing the importance of climate change and its implication on society and business, POWERGRID is continuously looking for opportunities to combat this threat and accordingly, taken several steps/initiatives in this direction. Some of the initiatives undertaken are described below:

- POWERGRID is playing a key role in development of transmission infrastructure for integration of renewable energy resources and evolved a comprehensive transmission plan for grid integration of various Renewable Energy Zones (66.5 GW) in the country. Such initiative not only reduce the dependency on thermal generation but also provide boost to renewable generation by providing reliable grid connectivity which was earlier thought to be a major impediment for renewable energy development.
- POWERGRID has installed about 6 MWp Rooftop Solar PV systems covering more than 65 locations, which are cumulatively generating about 8 million units of electricity annually, thereby reducing CO_2 emission of approx. 8000 MT per year. Additionally, establishment of 5 MWp Rooftop Solar PV systems at 65 locations is under progress.
- Developing technology for use the inductive power in earth wire for powering of telecom antennas with huge potential to reduce emission of Green House Gases (GHGs) from DG sets, a constant source of pollution and GHGs emission. It is estimated that such initiative will result in saving of 40-60 tCO_2/ year/ location.
- Massive plantations with suitable indigenous species in and around all substation facilities. More than 4 lakh saplings have been planted during last decade.
- Developed and tested monopole structures for 400 kV and 765 kV voltage levels which will go long way in addressing RoW issues in densely populated urban areas, conservation of forest & aesthetic associated with big lattice tower.
- Provision for Rain Water Harvesting and collection of even used/waste water made mandatory for all Installations for conservation and recharging of ground water.
- Integrated Watershed Management in 10 villages of Jaiptana Block, Kalahandi District of Odisha in association with ICRISAT (International Crops Research Institute for the Semi-Arid Tropics) aimed at improving the rural livelihood through activities like soil and water conservation & productivity enhancement and crop diversification.
- In line with GoI E-Mobility mission towards lowering vehicular pollution and to ensure energy sustainability, POWERGRID has been developing Electric Vehicle (EV) Charging Stations across India to facilitate E-mobility solutions.
- Considering the impact of EHV transmission line on avifauna including GIB and in the absence country specific credible data, POWERGRID has taken an initiative in association with domain experts from Wildlife Institute of India (WII) to carry out a study titled **"Assessment of Impacts of power lines on Avifauna in the Arid planes of Western Gujarat"**.The outcome of the above study will help all Transmission and Distribution utilities in analysing the actual impacts of Power lines on avifauna as well as formulating/implementing better safeguard measures for their protection in future. The study has been completed and the final report/ recommendation are under finalization.
- In absence of availability of any viable alternative to SF_6, POWERGRID is giving utmost priority for management of SF_6, a potent Green House Gas and has been taking various management measures such as arresting of leakage, systematic monitoring and proper documentation each & every refilling of SF_6 etc. which has resulted in substantial reduction in leakage/refilling of SF_6.
- As regard capacity building, apart from organizing various seminars and workshops on Climate Change & Sustainable Development regularly for its employee, POWERGRID has entered into MoU with Global Reporting Initiative (GRI) South Asia for ensuring a better, clean and green future for our future generations in line with Govt. of India's commitment to United Nation's Sustainable Development Goals (SDGs) Agenda 2030.

Commissioned World's first 400 kV Reactor filled with natural ester oil, in place of, synthetic mineral oil at Maithon substation in West Bengal. Natural ester fluid is a vegetable seed-based fluid derived from renewable agricultural seed crops. Though ester oil is 40% costlier than synthetic mineral oil, its application at higher voltage levels provides utilities with safer and greener solution for high equipment performance compared to synthetic mineral oil.

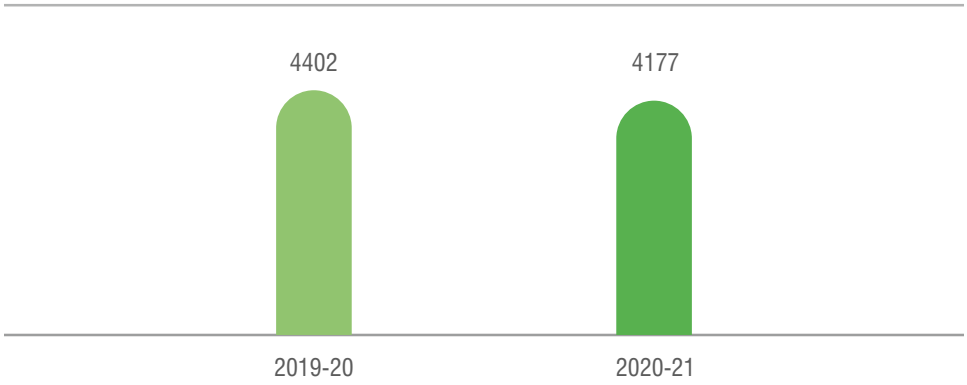
ENERGY EFFICIENCY

Our approach towards energy conservation is focused on reducing our overall energy consumption through various energy conservation/ management measures and increasing our dependency on renewable resources. We have implemented the use of lesser energy intensive appliances' such as LED bulbs, Fuel catalyst devices for DG sets, Solar Photo Voltaic in office building etc. to reduce our overall energy consumption. Furthermore, interventions in the field of e-mobility has resulted in increase in E-charging infrastructure and reduction in vehicular pollution.

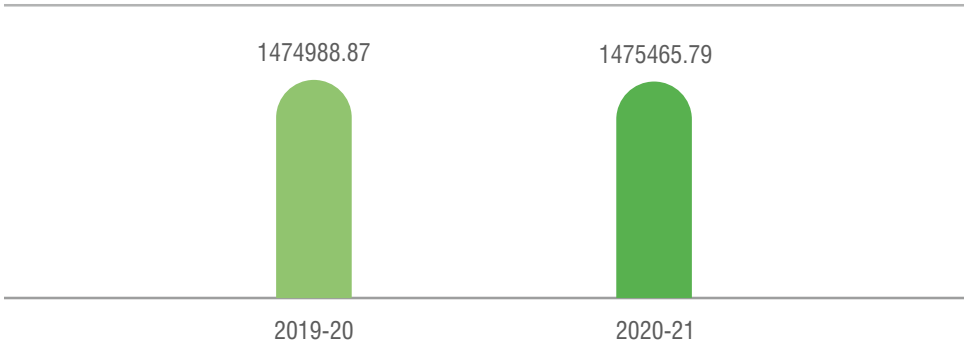
POWERGRID has also established a dedicated Energy Management Department to make inroads into the conservation of energy and reduction of carbon emission in industrial and commercial sectors & is pursuing business opportunities in energy saving by way of conducting energy audits and implementation of Energy Efficiency & Sustainable development projects in various Govt. as well as private agencies, e.g. industries, institutions, commercial establishments, State Transmission Utilities, etc. We are a BEE Grade-I Energy Service Company (ESCO) for investing/ implementing energy efficiency projects and has a large pool of certified energy auditors/ energy managers who are well qualified to offer energy efficiency solutions. POWERGRID is an ISO 50001:2018 certified organization, following a systematic approach in achieving a continual improvement of energy performance & the Energy Management System (EnMS).

During the reporting period, POWERGRID has signed MoU with institutions such as IIT (Roorkee), CSIR-NEERI for facilitating efforts in Energy Efficiency and Sustainable Energy.

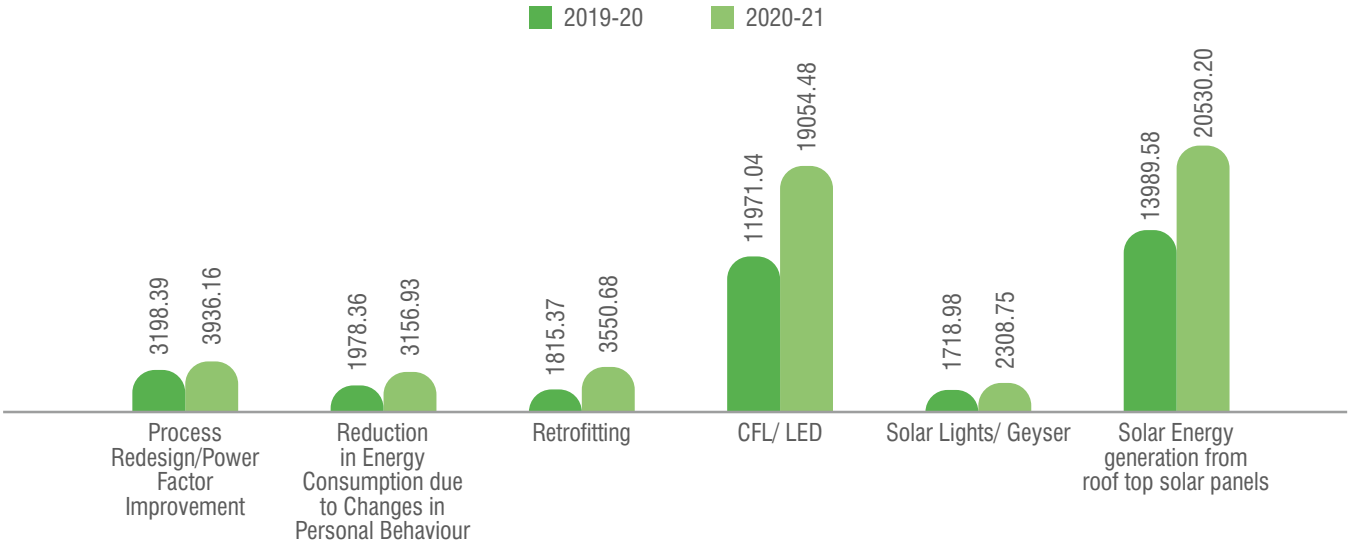
Direct Energy Consumption (GJ)



Indirect Energy Consumption (GJ)



Energy Savings (GJ)



INTEGRATION OF RENEWABLE ENERGY

The total installed power generation capacity of India as on 31st Mar'21 was 382 GW, out of which 235 GW is Thermal, 46 GW is Hydro, 94 GW is Renewable and 7 GW is Nuclear. Since the installed capacity is predominantly coal based and therefore, is a major source of carbon dioxide emissions in India. Hence, there exists scope for reducing the CO_2 emissions in the country by way of fuel substitution & increased use of renewable energy sources. Towards this, POWERGRID has implemented Green Energy Corridors (GEC) - Inter-State Transmission System (ISTS) at 765 kV & 400 kV level as well as its control infrastructure comprising forecasting of renewable generation, dynamic compensation, establishment of Renewable Energy Management centres (REMC) at SLDCs/ RLDCs/ NLDC level, etc.

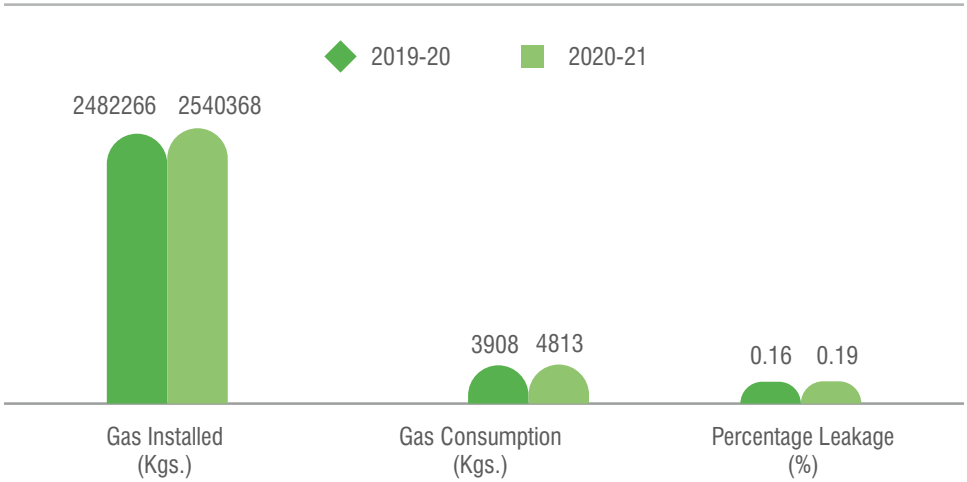
EMISSION CONTROL

Power transmission project activities do not involve any chemical process, no direct emission/ waste to environment. The only emission that can be attributed to our activities is from operation of DG sets used intermittently as power backup. However, regular maintenance of DG sets ensured containment of emission levels well within the permissible limits prescribed by Pollution Control Board.

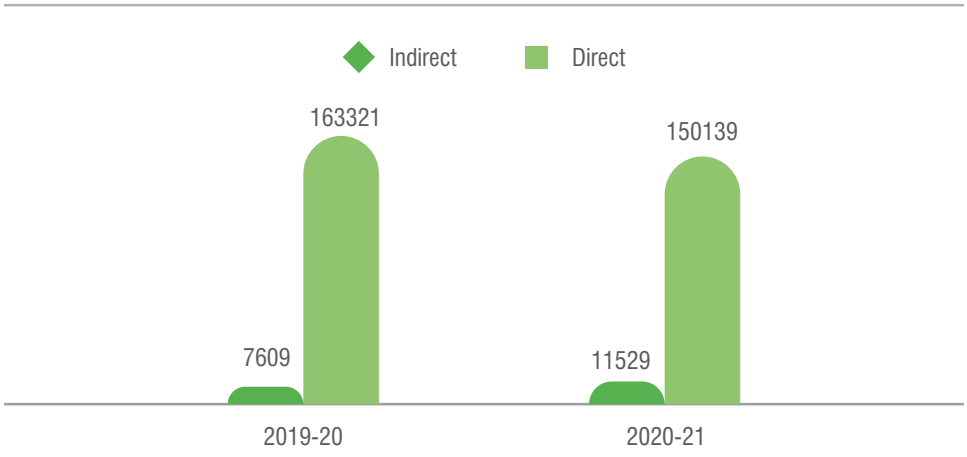
The Scope 1 emission, included in the report for the first time, include emissions from DG sets and possible leakage of SF_6 from our equipments.

SF_6 is a potent GHG which is used in our equipments such as circuit breakers, GIS etc. Its leakage is controlled through systematic & regular monitoring and any drop-in pressure is acted upon immediately. We have introduced very sensitive SF_6 leakage detectors in all the relevant equipment's to test for leakage points which are attended immediately to arrest any gas discharge into the atmosphere. Considering the potential impact of SF_6 gas, efforts are being made to find its alternative as well as to make the leakage norms stringent. For instance, permissible limit of SF_6 leakage from equipment has been restricted to 0.5% including a performance guarantee of 10 years towards reducing/eliminating the negative environmental externalities of our activities. Further, contaminated SF_6 gas is collected and stored separately to prevent its release in atmosphere. Procurement of equipment using ODS like CFC, Halon, has been banned in line with the Montreal protocol signed by India.

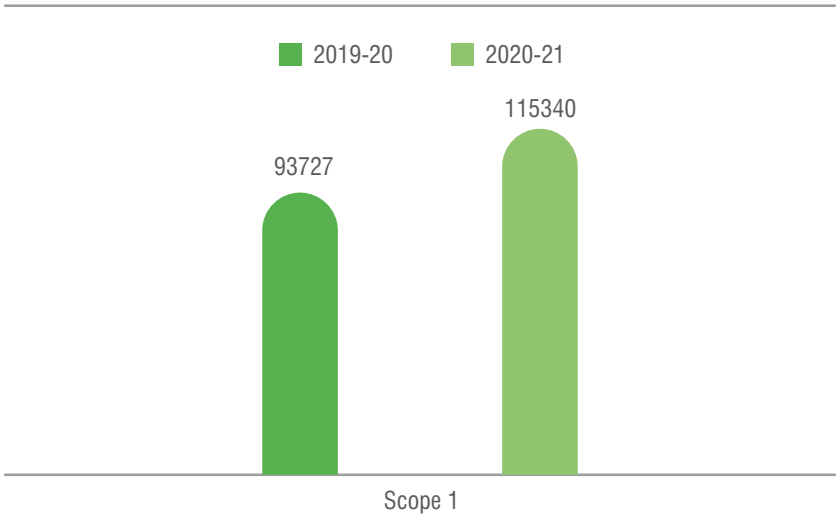
SF_6 Gas Consumption



Reductions in Green House Gases (tCO_2e)



Emission (tCO_2e)



Installed Rooftop Solar PV panels

WATER MANAGEMENT

POWERGRID's activities does not have any significant impact on water resources since water is not required for any of its operations & processes and is only used for domestic consumption for offices, colonies and horticulture etc.

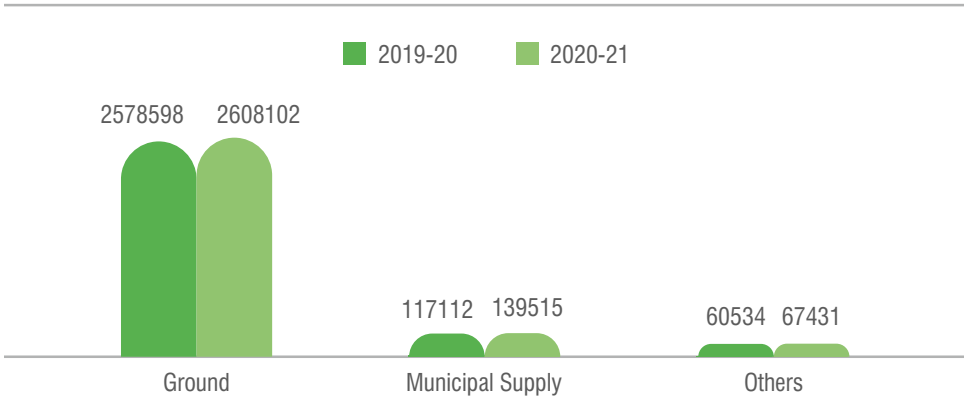
Various initiatives have been taken for improving water use efficiency and achieving zero discharge. Rain Water Harvesting system made integral part of substation design for conservation and recharging of ground water, which reflects POWERGRID's integrated water management approach.

No industrial effluents are generated from our establishments (substations) as there are no underlying chemical processes. However, a small quantity of domestic sewage is generated from office buildings and few residential quarters attached with our substations. Provision of soak pits has been made in every substation for the treatment of the domestic sewage.

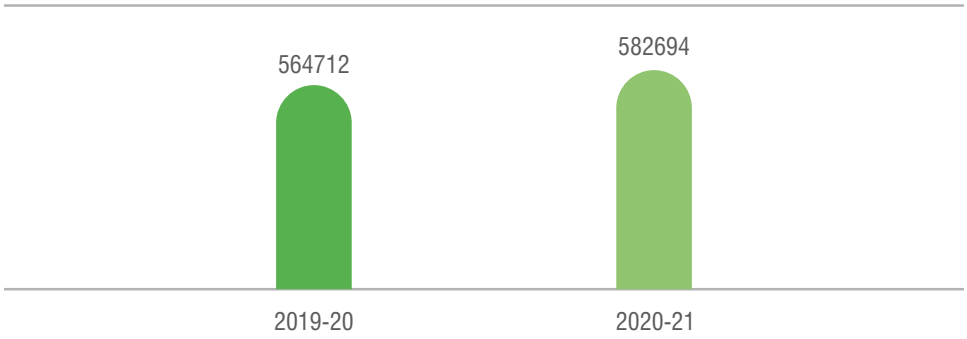
For comparatively large establishments such as residential colonies in cities like Gurgaon and Bangalore, Sewage Treatment Plants (STP) have been established for proper treatment of domestic waste and treated water is used for activities like Gardening and washing within the campus only. Further, contractors are encouraged to use treated water in construction activities from nearby available source to reduce dependence on regular water sources.

Additionally, POWERGRID has tried to play its part in resolving the critical issue of accessibility to water resources and improving rural livelihood, especially in rural areas by undertaking integrated rural watershed management projects in Kurnool (Andhra Pradesh) and Vijayapura (Karnataka) districts in association International Crops Research Institute for the Semi-arid Tropics (ICRISAT) under its CSR schemes.

Water Withdrawal (cu.m.)[3]



Volume of Water Recharged (cu.m.)[3]



[3] Water Consumption & Water recharged has increased due to increase in no. of substations from 244 to 254 over the period.

WASTE MANAGEMENT

Our Waste Management approach is focused on the 3R waste hierarchy – Reduce, Reuse & Recycle. Although there is no major solid or liquid waste generation in our business activities, we follow all applicable guidelines and norms of Central/ State Governments to ensure their proper disposal. The waste generated from our projects are metal scraps, used batteries, transformer oil and electronic waste. We dispose of our used batteries according to the 'Batteries (Management and Handling) Amendment Rules, 2010' which requires bulk consumers like POWERGRID to dispose all used batteries to dealers, manufacturers, registered recyclers, reconditioners or at the designated collection centres only and half yearly return is submitted to concerned State Pollution Control Board/ Committee. Used transformer oil has been categorized as hazardous as per the applicable Hazardous Waste (Management, Handling & Trans-boundary movement) Rules 2016, which requires its proper handling and disposal. In our establishments, transformer oil is changed only in rare case if it is found unsuitable for use due to failure of equipment, then the same is disposed by selling it to registered recyclers and annual return is submitted to concerned State Pollution Control Board/ Committee. Drums emptied of Transformer oil are disposed of through online auction on the website of M/s Metal Scrap Trading Corporation Ltd (MSTCL), a Miniratna PSU.

Metals scraps are generated mainly during construction activities such as tower erection and stringing of conductors. A pioneering initiative in respect of conductor/ cable drums recycling has also been initiated in one of our project in Kerala where 100% reuse of such emptied drums has been ensured through contract clause in spite of that the supplier is from Japan.

These scraps are sold through auctions to scrap vendors, thus, ensuring their reuse for various useful purposes in society and economy, considering the fact that India is net importer of scrap metals.

To arrest any oil spill, construction of oil sump/ pits are made an integral part of design with connection of individual pits to main collection sump. During the reporting period, no major spills resulting in contamination of ground water were reported.

Electronic Wastes such as Computers, Laptops, Printers, cartridges etc. are typical to any office setup. In India, e-waste is regulated by E-waste (Management & Handling) Rules, 2011, which mandates that it is the responsibility of the bulk consumer (such as POWERGRID) to ensure that e-waste generated is channelized to authorized collection center(s) or registered dismantler(s) or recycler(s) or is returned to the pick-up of take back services provided by the producer. POWERGRID, being a bulk consumer of electrical and electronic goods always ensures the disposal of the e-wastes generated from its office complexes in environment friendly manner following the provisions of the said regulation and maintains the records for scrutiny by State Pollution Control Board/ Committee.

Towards paper conservation and reduction in paper waste, our waste paper recycling plant is fully operation & further, the e-office application has resulted in significant reduction in use of paper. Further, with implementation of online DREAMS (Drawing Review and Engineering Approval Management System), the approval process of drawings has become paperless resulting in reduction of waste paper.

Green Waste Composter

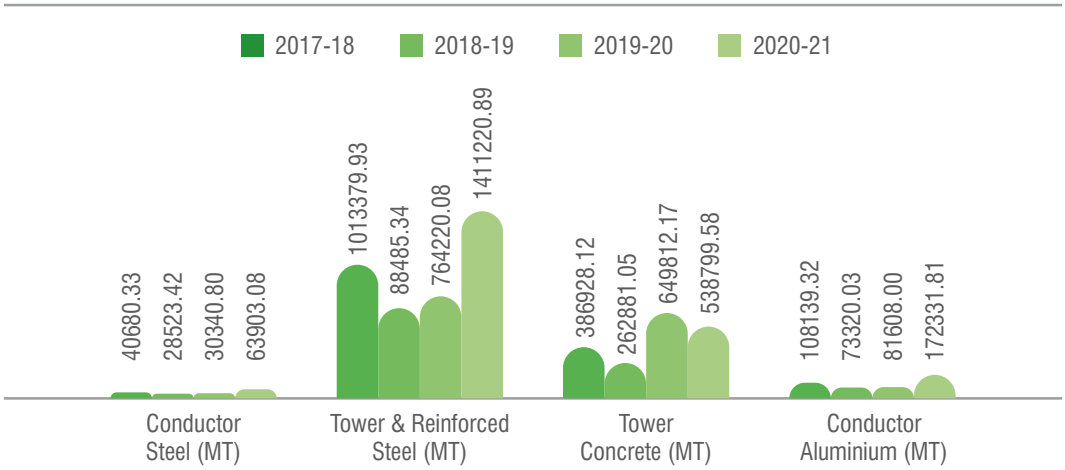
MATERIAL MANAGEMENT

Major raw materials used in transmission projects involve metals such as Steel, Aluminium etc. POWERGRID has taken many technological initiatives to reduce their consumption by implementing efficient designs. This can be seen in the case of our high capacity transmission lines 765 kV, ±800 HVDC for transmitting bulk power.

The scrap is recycled again to reproduce finished products which may be reused in our tower parts/ equipment.

Savings in Raw Material Consumption due to shifting from

400 kV to 765/800 kV lines
(765 kV D/c: 5000 MW & 800 kV HVDC: 6000 MW, 400 kV D/c: 1000 MW)



Materials used by weight or volume

S.No	Raw materials Used/ Consumed	Material Used	
		2019-20	2020-21
1	Steel (Tower Parts & Reinforcement) (MT)	500236	699824
2	Steel (Conductor) (MT)	21368	24805
3	Aluminium (Conductor) (MT)	58234	75725
4	Concrete (MT)	713795	927875
5	Transfomer Oil (KL)	15487	12071
6	Insulators (No.)	360264	507121

Total weight of waste by type & disposal method

S.No	Type of waste	2019-20	2020-21
	Non Hazardous		
1	Steel (Scrap) (MT)	7449	4870
2	Aluminium (Conductor) (MT)	1517	986
3	Insulator (No.)	1293069	1899244
	Hazardous		
1	Used Batteries (No.)	4118	8228
2	E-Waste (MT)	75	97

Percentage of products sold and their packaging materials that are reclaimed by category

S.No	Name of Packaging Material	Quantity Sold/Disposed off (Kg)	
		2019-20	2020-21
1	Wood such as Wooden Boxes, Cable drums etc	1872902	1122092
2	Oil Drums	117234	746208
3	Steel	374751	411167

Bird diverters installed on POWERGRID line

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419-1	Non-compliance with laws and regulations in the social and economic area	27, 89, 97

ASSURANCE STATEMENT

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Independent Assurance Statement

Intertek India Private Limited ('Intertek') has carried out an independent assurance on 7th Sustainability Report 2019-21 of **Power Grid Corporation of India Limited** ("POWERGRID"), a Government of India Enterprise.

Intended users:
The intended users of this assurance statement are the management and stakeholders of POWERGRID. Our responsibility in performing this task was limited to the verification of the Report, in accordance with the agreed scope of work. This assurance engagement is based on the assumption that the data and information provided to us is authentic and complete. Our assurance task was planned and carried out during Feb 2022.

Responsibilities of POWERGRID and assurance provider:
The management of POWERGRID has sole responsibility for the preparation and content of Sustainability Report (hereafter, SR). Intertek's statement represents its independent and balanced opinion on the content and accuracy of the information & data presented.

Assurance Standard:
Intertek undertook the assurance in accordance with **AA1000AS v3**, Type 1, Moderate-level assurance, covering:

- Evaluation of adherence to the AA1000APS (2018) Principles of Inclusivity, Materiality, Responsiveness and Impact (the Principles);
- Evaluation of adherence to requirements of GRI standards;
- Verification of the reliability of GRI Standards performance indicators and specific information related to the requirements for "In Accordance-Core".

Methodology:
Assurance activity was done virtually, involving document review, data verification, interactions with the Senior Management, ESMD team, CSR team, Technology Development Head, Finance Head, Company Secretary, Contract Services Head, HR Head, Asset Management Head, HRD Head, Quality Assurance Head and Sustainability team.

Risk based approach was adopted and verification efforts were concentrated on the identified issues of high material relevance to Company's business and its stakeholders.
Assurance activities included the following:

- Review of the processes by which POWERGRID defines the materiality issues that are relevant and material to its operations & its stakeholders;
- Review of processes and systems used to gather & consolidate data;
- Interviews with Officials responsible for Sustainability, HR, Asset Management, CSR, Finance, Company Secretary, HRD etc.;
- Assessment of the extent to which POWERGRID's Sustainability activities adhere to the Principles;
- Reviewed approach to stakeholder engagement and its materiality determination process;
- Examined and reviewed documents, data and other information made available virtually;
- Conducted interviews with key representatives including data owners and decision-makers from different functions;
- Performed sample-based reviews of the mechanisms for implementing POWERGRID's sustainability related policies, as described in the Report.

Scope and limitations:
Intertek was engaged to assure the 7th Sustainability Report, encompassing the period from 1st April 2019-31st Mar 2021. The verification was based on the procedures, documents, records and data provided by POWERGRID, and not verified physically at the site due to virtual nature of the assessment. Meetings, clarifications from POWERGRID were through concalls & emails. Interaction with RHQ, Bangalore was done by virtual means.
The reporting boundary is as set out in the Report, covering Sustainability Performance of POWERGRID. During the assurance process, we did not come across limitations to the scope of the agreed assurance engagement. No external stakeholders were interviewed as part of this assurance engagement. This statement relates specifically to the information disclosed in the Sustainability Report.

Findings, conclusions and recommendations:
Based on the assurance task, the Report provides a fair representation of POWERGRID's sustainability related disclosures. The Report includes statements and claims that reflect POWERGRID's achievements and challenges supported by documentary evidences and internal records. It is confirmed

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that the Report, along with the referenced information meets the requirement of Type-1, Moderate Assurance according to the AA1000AS v3 and GRI standards "In Accordance-Core".

Positive Observations:

- Strong thrust from all towards projects;
- CSR projects undertaken for the Society, with special mention to the Vishram Sadan project for patient's caretakers;
- During CoVID, Support to the Nation in sustaining the difficult time;
- Various projects initiated for improving efficiency & performance in the pandemic time also;
- Online portal for handling grievances of Employees as well as vendors;
- E-modules for trainings initiated, which has helped in effective trainings;
- Increasing competence of in-house engineers to do maintenance of key equipments, where earlier dependency was on the Original Equipment Manufacturer. Pandemic time gave this opportunity to become self-reliant;
- Developing local vendors;
- Initiation of various projects towards renewable energy, handling risks of digitalization etc.;

Recommendations:

- Material issues reported can be strengthened by enhancing the specific data and information;
- Disclosures of more indicators by including additional indicators can be thought of to further enhance the Sustainability Reporting.

Conclusions:

PRINCIPLE	COMMENTS
Inclusivity: the participation of stakeholders in developing and achieving an accountable and strategic response to sustainability	POWERGRID has mapped its internal and external stakeholders. Shareholders/Investors, Customers, SEBs, Funding agencies, Employees, Community, Government-Ministry of Power, Ministry of Finance, Regulators (SEBI/CERC/BSE/NSE), Suppliers & Contractors, Media, Technological institutions are the Key stakeholders. Stakeholders' engagement is a continuous process. A list of key stakeholders is published in the Report. POWERGRID engages with stakeholders through Annual general body meeting, Analyst meetings, meetings, Review missions, Investor communications, regular site visit & interactions with community, grievance mechanism, employee engagement survey, performance reviews, face to face discussions, Public consultations, open bid discussions, reports and also through the POWERGRID's website. The issues raised by the stakeholders are captured while identifying the material issues.
Materiality: determining the relevance and significance of an issue to an organization and its stakeholders	The stakeholder engagement conducted by POWERGRID led to identifying material issues. Apart from that, POWERGRID had taken inputs from top management, department heads, audit committee, internal departments, risk assessment, peer companies benchmarking for identification of Material issues. The priorities, whether high, medium or low, are based on how the material issues is important to stakeholders and the POWERGRID's business.
Responsiveness: an organization's response to stakeholder issues that affect its sustainability performance and is realized through decisions, actions and performance, as well as communication with stakeholders	POWERGRID attempts to respond to the stakeholder communications received and has incorporated the requirements in their sustainability projects. Internal initiatives include strong safety management system, E-modules of trainings for increasing competence of various teams, employee portal for grievance handling, developing internal competence, Opportunities for internal teams, digital substations, drone usage for line maintenance, contractor management, increased use of solar power, rainwater harvesting etc. Inputs from external stakeholders have been addressed through projects like Vishram Sadan for patients caretakers in hospitals, Vendor portal for grievance management, watershed management in villages, support to community during CoVID, operationalization of SMART classrooms in Govt. schools etc. The response activities undertaken following stakeholder communication depending on the complexity and potential impact of each concern.
Impact: an organization's approach to monitor, measure and be accountable for how its actions impact broader ecosystems	POWERGRID has systems to track materiality issues across sites through dashboards, impact assessment reports, reviews by management, apex safety board reviews, grievance mechanisms etc. In addition, POWERGRID adheres to regional regulations, and also has internal management systems. The monitoring of the actions and tasks happen at all the different levels of the organization. Internal and external audit procedures are in place to validate the data collection, storing, and management mechanisms that form the heart of the monitoring function.

Intertek's Competence and Independence:

Intertek is a global provider of assurance services with a presence in more than 100 countries employing more than 45000 people. The Intertek assurance team included Certified Sustainability Assurance Professionals, who were not involved in the preparation of any statements or data included in the Report except for this Assurance statement. Intertek maintains complete impartiality towards any people interviewed.

For Intertek India Private Limited,

SANDEEP P VIG Digitally signed by SANDEEP VIG Date: 2022.02.23 15:32:13 +05'30'

AA1000 Licensed Report 000-163/V3-FEO4S

Lead Verifier
(Gayathri Ramanna)

Director
(Sandeep Vig)

New Delhi, Feb 22, 2022

ABBREVIATIONS

ADB	Asian Development Bank
AGM	Annual General Meeting
AIS	Air Insulated Switchyard
AP	AccountAbility Principles
BEE	Bureau of Energy Efficiency
BPL	Below Poverty Line
CDA	Conduct Discipline and Appeal
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CFC	Chloro Flouro Carbon
CGSs	Central Generating Stations
Ckm	Circuit Kilometers
CPSE	Central Public Sector Enterprise
CRZ	Coastal Regulation Zone
CSR	Corporate Social Responsibility
CTU	Central Transmission Utility
D/c	Double Circuit
DA	Dearness Allowance
DG	Diesel Generator
DISCOM	Distribution Company
DPE	Department of Public Enterprises
EHV	Extra High Voltage
EHVAC	Extra High Voltage Alternating Current
EMP	Environment Management Plan
EPF	Employee Provident Fund
eV/ EV	Electric Vehicle
FTB	Fixed Tenure Basis
FY	Financial Year
GEC	Green Energy Corridor
GHG	Green House Gases
GIS	Gas Insulated Switchyard
GJ	Giga Joule
GoI	Government of India
GRI	Global Reporting Initiative
GW	Gigawatt
HR	Human Resource
HRA	House Rent Allowance
HRD	Human Resource Development
HVDC	High Voltage Direct Current
IFC	International Finance Corporation
InvIT	Infrastructure Investment Trust
IPP	Independent Power Producers
ISO	International Organization for Standardization
ISTS	Inter-state Transmission System
kV	kilo Volt
kWh	kilo Watt-hour
LED	Light Emitting Diode
LIC	Life Insurance Corporation of India

MDGs	Millennium Development Goals
MoP	Ministry of Power
MoU	Memorandum of Understanding
MPR	Monthly Progress Report
MPLS	Multi-Protocol Label Switching
MT	Metric Ton
MTOA	Medium Term Open Access
MVA	Mega Volt Ampere
MW	Megawatt
MWp	Megawatt peak
NER	North Eastern Region
NLDC	National Load Dispatch Centre
O&M	Operation & Maintenance
OBC	Other Backward Classes
ODS	Ozone Depleting Substance
OFC	Optical Fiber Cable
OHSAS	Occupational Health and Safety Assessment Series
OPGW	Optical Ground Wire
PAPs	Project Affected Persons
PAS	Publicly Available Specification
PAT	Profit After Tax
PNBC	POWERGRID National Bipartite Committee
POSOCO	Power System Operation Corporation Limited
PRBC	POWERGRID Regional Bipartite Committee
PRMB	Post-Retirement Medical Benefit
R&D	Research & Development
RHQ	Regional Head Quarter
RLDC	Regional Load Dispatch Centre
RoW	Right of Way
RTAMC	Regional Transmission Asset Management Centre
RTI	Right to Information
S/s	Substation
SA	Social Accountability
SAARC	South Asian Association for Regional Cooperation
SC	Scheduled Castes
SDGs	Sustainable Development Goals
SEBI	Securities and Exchange Board of India
SES	Stakeholder Engagement Standard
SF_6	Sulphur Hexafluoride
SLDC	State Load Dispatch Centre
SOP	Standard Operating Procedure
ST	Scheduled Tribes
STUs	State Transmission Utilities
TBCB	Tariff Based Competitive Bidding
UMPP	Ultra Mega Power Projects
UT	Union Territory
VC	Video Conferencing

पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

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